

1/25/84

```

0000 = A000          ORG #A000
                     LIST I
A000                START
A000                OPEN #IOCB1,#OREAD,#0,#KEYBRD
A000 +A210          LDX #IOCB1
A002 +A903          LDA #OPEN
A004 +9D4203        STA ICCOM,X
A007 +A9EE          LDA #KEYBRD&#xFF
A009 +9D4403        STA ICBAL,X
A00C +A9BF          LDA #KEYBRD/256
A00E +9D4503        STA ICBAL,X
A011 +A904          LDA #OREAD
A013 +9D4A03        STA ICAX1,X
A016 +A900          LDA #0
A018 +9D4B03        STA ICAX2,X
A01B +2056E4        JSR CIOV
A01E                OPEN #IOCB2,#13,#0,#EDITOR
A01E +A220          LDX #IOCB2
A020 +A903          LDA #OPEN
A022 +9D4203        STA ICCOM,X
A025 +A9F1          LDA #EDITOR&#xFF
A027 +9D4403        STA ICBAL,X
A02A +A9BF          LDA #EDITOR/256
A02C +9D4503        STA ICBAL,X
A02F +A90D          LDA #13
A031 +9D4A03        STA ICAX1,X
A034 +A900          LDA #0
A036 +9D4B03        STA ICAX2,X
A039 +2056E4        JSR CIOV

```

*
* THIS SECTION WILL CAUSE PROG
* RUN IN RAM TO CRASH
*

```

A03C A94D          LDA #MENU&#xFF
A03E 8580          STA R1
A040 A9A0          LDA #MENU/256
A042 8581          STA R1+1
A044 A001          LDY #1
A046 A900          LDA #0
A048 9180          STA (R1),Y
A04A C8            INY
A04B 9180          STA (R1),Y

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*

*

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A04D 201DBD        MENU JSR COLORS - SET COLORS
A050 2075BD        JSR FRONTEND - SET CHARS + DISPLAY LIST
A053 A558          LDA #58
A055 8580          STA R1
A057 A559          LDA #59
A059 8581          STA R1+1
A05B A99F          LDA #SCDATA&#xFF

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A05D 8582          STA R2
A05F A9BE          LDA #SCDATA/256
A061 8583          STA R2+1
A063 A9C0          LDA #C0
A065 8584          STA R3
A067 A903          LDA #3
A069 8585          STA R3+1
A06B 205FA5        JSR SCR0 ;SHORT VERSION OF SCREEN FOR MENU ONLY
A06E A9FF          MEN1 LDA #255
A070 8DFC02        MEN15 STA 764 - LAST KEY
A073 A900          MEN15 LDA #0
A075 8DB602        STA 694; MAKE SURE INVFLG OFF
A078 ADFC02        LDA 764 - LAST KEY
A07B C9FF          CMP #255
A07D F0F4 ^A073    BEQ MEN15
A07F A21C          LDX #28
A081 207FA6        JSR MESSAGES
A084 2029B9        JSR GET1 - CREAT
A087 C931          CMP #31
A089 D00B ^A076    BNE MEN2
A08B 206ABF        JSR UNDO; RESET SCREEN FORMAT
A08E 2073A1        JSR DESIGN
A091 A933          LDA #33; FORCE TO WARM
A093 8DB800        STA WARM; LOAD RTN BELOW
A096 C932          MEN2 CMP #32 - LOAD
A098 F012 ^A0AC    BEQ MEN4
A09A C933          CMP #33 - RESUME
A09C D0D0 ^A06E    BNE MEN1
A09E ADB800        LDA WARM; THIS SECTN ALLOWS
A0A1 F0CB ^A06E    BEQ MEN1; RETURN TO DATA SCRNM
A0A3 20F8A3        JSR LDD1
A0A6 20B1B2        JSR CLEAR; PATCH FOR SCRAMBLED DATA FROM SYS RST AF:
A0A9 4CAFA0        JMP MEN5

*
*
A0AC 20E1A3        MEN4 JSR LDDATA
A0AF A984          MEN5 LDA #84 ;SET BKGRND COLOR
A0B1 8DC802        STA 712
A0B4 2048BD        JSR DLIST

*
*
*****
*
*      MAIN CONTROL SECTION
*
*****
= 00B0            TONHLD = $B0
*                = $B1 THIS POS NOT AVAILABLE
*PRFORM          = $B2, $B3
= 00B4            MRGNSW = $B4
* $B5, $B6, $B7 ARE USED - SEE

```

```

* CASSETTE RTN EQUATES IN MYTEXT
= 00B8 WARM = $B8; IND WARM RTN TO MENU
= 00B9 OPNERR = $B9; USED IN OPNPRNT RTN
= 00BA PRNTSW = $BA; IND FORMAT PRINTING
= 00BB CONREG = $BB; 2 BYTES INCL $BC
= 00BD HOLDA = $BD
= 00BE HOLDX = $BE
= 00BF HOLDY = $BF

A0B7 PROC
A0B7 A212 OPTIONS LDX #18
A0B9 207FA6 JSR MESSAGES
A0BC 20D0BF JSR COLRON; SET TOP ROW COLOR
A0BF A9FF LDA #255
A0C1 8DFC02 STA 764
A0C4 ADFC02 :LOOP LDA 764
A0C7 C92A CMP #42; E - ENTER 1
A0C9 F019 ^A0E4 BEQ :ENTER
A0CB C928 CMP #40; R - RETRIEVE 2
A0CD F023 ^A0F2 BEQ :RETRV
A0CF C938 CMP #56; F - FORM PRINT 3
A0D1 F025 ^A0F8 BEQ :FPRNT
A0D3 C93E CMP #62; S - SAVE 3
A0D5 D003 ^A0DA BNE :LOOP1
A0D7 4C5DA1 JMP :EXITRTN
A0DA C925 :LOOP1 CMP #37; M - MEMORY 5
A0DC D0E6 ^A0C4 BNE :LOOP
A0DE 2085BF JSR MEMRY
A0E1 4CB7A0 JMP OPTIONS

*
A0E4 20D6BF :ENTER JSR COLROF; TOP ROW COLOR OFF
A0E7 A201 LDX #1; SET FLDPTR - ENTDAT
A0E9 2009A4 :ENT1 JSR ENTDAT
A0EC 20D4AB JSR STORDAT
A0EF 4CE9A0 JMP :ENT1
A0F2 2067AE :RETRV JSR RETREV
A0F5 4CB7A0 JMP OPTIONS
A0F8 A216 :FPRNT LDX #22 Change format Print
A0FA 207FA6 JSR MESSAGES
A0FD A9FF :FPR00 LDA #255
A0FF 8DFC02 STA 764
A102 AD1FD0 :FPR01 LDA 53279
A105 C903 CMP #3
A107 F00E ^A117 BEQ :FPR02 -(F7) or (F1)
A109 ADFC02 LDA 764
A10C C912 CMP #18 Change
A10E F010 ^A120 BEQ :FPR03
A110 C90A CMP #10 Print
A112 F012 ^A126 BEQ :FPR04
A114 4C02A1 JMP :FPR01
A117 203EA5 :FPR02 JSR SCREEN = PRINT SCREEN
A11A 207EAD JSR LSTLIN

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A11D 4CB7A0      JMP OPTIONS
A120 20D6BF      :FPR03 JSR COLROF -
A123 2084B3      JSR FORMAT -
A126 20D6BF      :FPR04 JSR COLROF
A129 A901        LDA #1
A12B 85BA        STA PRNTSW
A12D A209        LDX #9 ENTER SEARCH KEY
A12F 207FA6      JSR MESSAGES -
A132 A201        LDX #1
A134 2009A4      JSR ENTDAT -
A137 207EAD      JSR LSTLIN -
A13A 20ECB8      JSR OPNPRNT - OPEN FILE
A13D A5B9        LDA OPNERR -
A13F F003 ^A144  / BEQ :FPR1 - OPEN ERROR
A141 4CB7A0      JMP OPTIONS
A144 A99B        :FPR1 LDA #EOL
A146 2044B9      JSR PUT3
A149 A900        LDA #0
A14B 85B4        STA MRGNSW ;MARGIN SWITCH IN FPRINT
A14D 20CDB0      JSR SRCH1
A150             CLOSE #IOCB3
A150 +A230       LDX #IOCB3
A152 +A90C       LDA #CLOSE
A154 +9D4203     STA ICCOM,X
A157 +2056E4     JSR CIOV
A15A 4CB7A0      JMP OPTIONS

*
A15D             :EXITRTN
A15D 20D6BF      JSR COLROF
A160 209CA9      JSR WRDATA
A163 207EAD      JSR LSTLIN
A166 E000        CPX #0
A168 F006 ^A170  BEQ :EXIT
A16A 2085A6      JSR MSGS1
A16D 2091BC      JSR BEEP
A170 4CB7A0      :EXIT JMP OPTIONS
                        EPROC

*****
*
*      DESIGN SCREEN ROUTINE
*
*****

A173             DESIGN
                        INCLUDE D:DSGNSCRN
                        MSGFLG = R15
A173 208BA5      PRSCRN JSR ZROREGS
A176 A901        LDA #1
A178 8DF002      STA 752 ;DISABLE CURSOR
A17B A97D        LDA #125 ;CLEAR SCREEN
A17D 2040B9      JSR PUT2
A180 AD1FD0      LDA 53279 - OPTIONS

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A183 C903          CMP #3
A185 D007 ^A18E    BNE PRSCNT
A187 A5B8          LDA WARM -
A189 F003 ^A18E    BEQ PRSCNT-
A18B 203EA5        JSR SCREEN - PUT IN SCREEN DATA
A18E A926          PRSCNT LDA #38
A190 8553          STA 83 ; SET RIGHT MARGIN
A192 859C          STA MSGFLG ; CLR MSGFLG
A194 18            PRSRTN CLC
A195 A558          LDA #58 ; THIS ROUTINE
A197 6998          ADC #98 ; SETS UP A POINTER
A199 8580          STA R1 ; TO THE LAST ROW OF
A19B A559          LDA #59 ; THE SCREEN SO IT
A19D 6903          ADC #3 ; CAN BE 'CLEANED' IN
A19F 8581          STA R1+1 ; ROUTINE BELOW
A1A1 A902          PRS   LDA #2
A1A3 8555          STA #55 ; POSITION COL
A1A5 A901          LDA #1
A1A7 8554          STA #54 ; POSITION ROW
A1A9 A900          LDA #0
A1AB 8DF002        STA 752 ; ENABLE CURSOR
A1AE A208          LDX #8
A1B0 207FA6        JSR MESSAGES - CREATE DATA ENTRY SCREEN
A1B3 2095AD        JSR CHRRPL
A1B6 A91D          LDA #29 ; CURSOR DOWN
A1B8 D046 ^A200    BNE PRS2
A1BA              PRS0   LDA #255
A1BA A9FF          STA 764
A1BC 8DFC02        PRS01 JSR CLENROW
A1BF 2012A2        LDA 764
A1C2 ADFC02        CMP #255 ; THIS RTN LOOKS
A1C5 C9FF          BNE PRS02 ; TO SEE IF A KEY
A1C7 D00A ^A1D3    LDA #D01F ; HAS BEEN PRESSED
A1C9 AD1FD0        CMP #6 ; OR THE START KEY
A1CC C906          BNE PRS01
A1CE D0EF ^A1BF    JMP OUT1 - ANALYZE
A1D0 4C4FA2        PRS02
A1D3              CMP #60 ; CAPS LOWER
A1D3 C93C          BEQ PRS0
A1D5 F0E3 ^A1BA    CMP #118 ; CLEAR SCREEN
A1D7 C976          BEQ PRS0
A1D9 F0DF ^A1BA    LDA #0
A1DB A900          STA MSGFLG ; CLEAR MSG FLAG
A1DD 859C          JSR CLENROW
A1DF 2012A2        JSR GET1
A1E2 2029B9        CMP #28
A1E5 C91C          BEQ SCRNTOP
A1E7 F037 ^A220    CMP #29
A1E9 C91D          BEQ SCRNBOT
A1EB F03C ^A229    CMP #30
A1ED C91E

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EN

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A1EF F00A ^A1FB      BEQ PRS1
A1F1 C91F            CMP #31
A1F3 F006 ^A1FB      BEQ PRS1
A1F5 C99B            CMP #155
A1F7 F039 ^A232      BEQ RTRNKEY
A1F9 D005 ^A200      BNE PRS2
A1FB A000            PRS1 LDY #0
A1FD 8CB602          STY 694
A200 A455            PRS2 LDY $55 ;LAST COL?
A202 C026            CPY #38
A204 D006 ^A20C      BNE PRS3
A206 A454            LDY $54 ;LAST ROW?
A208 C016            CPY #22
A20A F02E ^A23A      BEQ NOSCROL
A20C                PRS3
A20C 2040B9          JSR PUT2
A20F 4CBAA1          JMP PRS0
*
A212 A59C            CLENROW LDA MSGFLG
A214 D009 ^A21F      BNE CLEN2
A216 A027            LDY #39
A218 A900            LDA #0
A21A 9180            CLEN1 STA (R1),Y
A21C 88              DEY
A21D 10FB ^A21A      BPL CLEN1
A21F 60              CLEN2 RTS
*
A220 A454            SCRNTOP LDY $54
A222 C002            CPY #2
A224 D0D5 ^A1FB      BNE PRS1
A226 4CBAA1          JMP PRS0
*
A229 A454            SCRNBOT LDY $54
A22B C016            CPY #22
A22D D0CC ^A1FB      BNE PRS1
A22F 4CBAA1          JMP PRS0
*
A232 A454            RTRNKEY LDY $54
A234 C016            CPY #22
A236 F002 ^A23A      BEQ NOSCROL
A238 D0C1 ^A1FB      BNE PRS1
*
A23A A001            NOSCROL LDY #1
A23C 8CF002          STY 752 ;TURN CURSOR OFF
A23F 2040B9          JSR PUT2
A242 C654            DEC $54 ;BACK UP TWO ROWS
A244 C654            DEC $54
A246 A000            LDY #0 ;TURN CURSOR BACK ON
A248 8CF002          STY 752
A24B A99B            LDA #155 ;PRINT A RTRN CHR
A24D D0BD ^A20C      BNE PRS3

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*
*
*      MOVE SCREEN DATA TO BUFFER
*      AND ANALYZE FIELDS
*
A24F 208BA5      OUT1      JSR ZROREGS
A252 A901        LDA #1      ;THIS RTN GETS RID
A254 8DF002      STA 752     ;OF THE CURSOR
A257 A91E        LDA #30
A259 2040B9      JSR PUT2
A25C 18          CLC
A25D A558        LDA #58     ;58 AND 59 POINT TO
A25F 6928        ADC #40
A261 8580        STA R1      ;SCREEN MEMORY
A263 A559        LDA #59     + 2 Lines
A265 6900        ADC #0
A267 8581        STA R1+1
A269 A900        LDA #SCRNBFF&#xFF
A26B 8582        STA R2
A26D A906        LDA #SCRNBFF/256
A26F 8583        STA R2+1
A271 A000        LDY #0
A273 A200        LDX #0
A275 8EC009      STX FLDDAT
          = 0084      COLCNT = R3
          = 0085      ROWCNT = R3+1
          = 0086      BLKFLG = R4
          = 0087      BUFPTR = R4+1
          = 0088      FLDFLG = R6+1 ✓
          = 008C      RCLGLO = R7
          = 008D      RCLGHI = R7+1
A27B A900        LDA #0
A27A 858C        STA RCLGLO
A27C 858D        STA RCLGHI
A27E A901        LDA #1
A280 8585        STA ROWCNT
A282 B180        ANLTOP    LDA (R1),Y      ;MOVE 1 BYTE
A284 2065A3      JSR BLDBUF
A287 C980        CMP #128.      ; INVERSE?
A289 3030 ^A28B  BMI ANL2
A28B A58B        LDA FLDFLG      ; FLDFLG SET?
A28D F009 ^A29B  BEQ ANL1
A28F FEC009      INC FLDDAT,X    ; INC FLD LEN
A292 2055A3      JSR RECCTR
A295 4CBFA2      JMP ANL3
A29B EEC009      ANL1<      INC FLDDAT      ; INC FLD CNT
A29B E8          INX
A29C B180        LDA (R1),Y
A29E 9DC009      STA FLDDAT,X    ; TYPE
A2A1 E8          INX
A2A2 A584        LDA COLCNT

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SCRN BUFFER

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A2A4  9DC009          STA FLDDAT,X      ;COLUMN
A2A7  2055A3          JSR RECCTR
A2AA  E8              INX
A2AB  A585            LDA ROWCNT
A2AD  9DC009          STA FLDDAT,X      ;ROW
A2B0  E8              INX
A2B1  A901            LDA #1
A2B3  9DC009          STA FLDDAT,X      ;SET LEN TO 1
A2B6  858B            STA FLDFLG        ;SET FLDFLG
A2B8  4CBFA2          JMP ANL3
A2BB  A900            LDA #0
A2BD  858B            STA FLDFLG        ;CLR FLDFLG
A2BF  E684            INC COLCNT        ;INC COL
A2C1  A584            LDA COLCNT
A2C3  C928            CMP #40 ;END OF ROW?
A2C5  D00C ^A2D3      BNE ANL4
A2C7  E685            INC ROWCNT        ;INC ROW
A2C9  A585            LDA ROWCNT
A2CB  C917            CMP #23 ;END OF PAGE?
A2CD  F00C ^A2DB      BEQ ANLXIT
A2CF  A900            LDA #0 ;RESET COL
A2D1  8584            STA COLCNT
A2D3  C8              INY              ;INC BUF PTRS
A2D4  D0AC ^A282      BNE ANLTOP
A2D6  E681            INC R1+1
A2D8  4C82A2          JMP ANLTOP
A2DB  ADC009          LDA FLDDAT
A2DE  204DA3          JSR TPOT3
A2E1  0EC009          ASL FLDDAT
A2E4  0EC009          ASL FLDDAT
A2E7  A2FF            LDX #$FF
A2E9  E8              INX
A2EA  ECC009          CPX FLDDAT
A2ED  F009 ^A2F8      BEQ TAPOUT
A2EF  BDC109          LDA FLDDAT+1,X
A2F2  204DA3          JSR TPOT3
A2F5  4CE9A2          JMP ANLX1
A2F8  A58C            LDA RCLGLO ;TOTAL RECORD LNG
A2FA  204DA3          JSR TPOT3
A2FD  A58D            LDA RCLGHI
A2FF  204DA3          JSR TPOT3
A302  A900            LDA #0
A304  204DA3          JSR TPOT3
A307  204DA3          JSR TPOT3

*
A30A  204DA3          JSR TPOT3; PRNT FORMT MARGIN
A30D  18              CLC
A30E  6EC009          ROR FLDDAT
A311  6EC009          ROR FLDDAT
A314  A200            LDX #0
A316  E8              INX

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A317 A900 LDA #0
A319 204DA3 JSR TPOT3
A31C 8A TXA
A31D 204DA3 JSR TPOT3
A320 ECC009 CPX FLDDAT
A323 D0F1 ^A316 BNE TPOT1
A325 A980 LDA #$80
A327 204DA3 JSR TPOT3
A32A A901 LDA #1
A32C 204DA3 JSR TPOT3
A32F A99B LDA #EOL
A331 204DA3 JSR TPOT3
A334 A219 LDX #25; NO FIELD MSG
A336 ADC009 LDA FLDDAT
A339 F006 ^A341 BEQ TPOT15
A33B C93D CMP #61.
A33D 900D ^A34C BCC TPOT2
A33F A21A LDX #26; TOO MANY FLDS MSG
A341 869C TPOT15 STX MSGFLG; FOR CLNROW
A343 207FA6 JSR MESSAGES
A346 2091BC JSR BEEP
A349 4C8EA1 JMP PRSCNT
A34C 60 TPOT2 RTS
*
A34D 20A2A5 TPOT3 JSR INBFPT
A350 A487 LDY BUFPTR
A352 9182 STA (R2),Y
A354 60 RTS
*
*
A355 F8 RECCTR SED ;TO AVOID $9B LEN (EOL)
A356 A58C LDA RCLGLO
A358 18 CLC
A359 6901 ADC #1
A35B 858C STA RCLGLO
A35D A58D LDA RCLGHI
A35F 6900 ADC #0
A361 858D STA RCLGHI
A363 D8 CLD
A364 60 RTS
*
*
*
A365 84BF BLDBUF STY HOLDDY ;SAVE REGSTRS
A367 86BE STX HOLDDX
A369 85BD STA HOLDA
A36B A487 LDY BUFPTR
A36D C900 CMP #0 ;BLANK?
A36F F03F ^A3B0 BEQ BLD3
A371 A586 LDA BLKFLG ;BLNK FLG SET?
A373 F005 ^A37A BEQ BLD1

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60 fld msg

5AUG

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A375 C686          DEC BLKFLG    ; IF IT WAS, SET TO ZERO
A377 20A2A5        JSR INBFPT    ; INCR BUFFER PTR
A37A A5BD          BLD1         LDA HOLDA
A37C C980          CMP #128      ; INVERSE CHAR?
A37E 301F ^A39F    BMI BLD2
A380 A58B          LDA FLDFLG    ; INV FLAG SET?
A382 D00F ^A393    BNE BLD11
A384 A980          LDA #128
A386 A487          LDY BUFPTR
A388 9182          STA (R2),Y    ; INV BLNK TO BUF
A38A 20A2A5        JSR INBFPT
A38D A900          LDA #0
A38F A487          LDY BUFPTR
A391 9182          STA (R2),Y    ; SET INV CTR TO 0
A393 A487          BLD11        LDY BUFPTR
A395 B182          LDA (R2),Y    ; THIS SECTION
A397 AA            TAX           ; INCRMNTS THE
A398 E8            INX           ; INV CHR CTR.
A399 8A            TXA
A39A 9182          STA (R2),Y
A39C 4CDAA3        JMP BLD6
A39F A48B          BLD2         LDY FLDFLG
A3A1 F003 ^A3A6    BEQ BLD21
A3A3 20A2A5        JSR INBFPT
A3A6 A487          BLD21        LDY BUFPTR
A3A8 9182          STA (R2),Y    ; MOVE CHR TO BUFF
A3AA 20A2A5        JSR INBFPT    ; INCR BUFFER PTR
A3AD 4CDAA3        JMP BLD6
A3B0 A48B          BLD3         LDY FLDFLG
A3B2 F003 ^A3B7    BEQ BLD31
A3B4 20A2A5        JSR INBFPT
A3B7 A686          BLD31        LDX BLKFLG    ; BLANK FLAG SET?
A3B9 D00D ^A3C8    BNE BLD4
A3BB E686          INC BLKFLG    ; SET BLANK FLAG
A3BD A487          LDY BUFPTR
A3BF 9182          STA (R2),Y    ; MOVE BL TO BUFF
A3C1 20A2A5        JSR INBFPT    ; INCR BUFFER PTR
A3C4 A487          LDY BUFPTR
A3C6 9182          STA (R2),Y    ; SET BLNK CT TO 0
A3C8 A487          BLD4         LDY BUFPTR
A3CA B182          LDA (R2),Y    ; THIS SECTION
A3CC AA            TAX           ; INCREMENTS THE
A3CD E8            INX           ; COUNTER IN THE
A3CE 8A            TXA           ; SCREEN BUFFER
A3CF 9182          STA (R2),Y
A3D1 C99A          CMP #154
A3D3 D005 ^A3DA    BNE BLD6      ; IF IT INCR TO 0
A3D5 C686          DEC BLKFLG    ; MOVE BUFPTR OVER
A3D7 20A2A5        JSR INBFPT    ; AND START BLNK COUNT OVER
A3DA A4BF          BLD6         LDY HOLDY
A3DC A6BE          LDX HOLDX

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A3DE  A5BD          LDA HOLDA
A3E0  60            RTS

A3E1  A900          LDDATA  LDA #0
A3E3  85B8          STA WARM
A3E5  20BBA5        JSR ZROREG -
A3E8  20D9A9        JSR RDDATA -
A3EB  E000          CPX #0
A3ED  F009 ^A3F8    BEQ LDD1
A3EF  207FA6        JSR MESSAGES
A3F2  2091BC        JSR BEEP
A3F5  4C6EA0        JMP MEN1
A3F8  206ABF        LDD1   JSR UNDO; RESET SCREEN FORMAT
A3FB  203EA5        JSR SCREEN - SET UP SCREEN
A3FE  207EAD        JSR LSTLIN
A401  20A4AD        JSR POINTERS - SET POINTERS
A404  A901          LDA #1
A406  85B8          STA WARM
A408  60            RTS

*
*
*
A409          ENTDAT
                INCLUDE D:ENTRDATA
A409          PROC
                :DATALO = R5
                :DATAHI = R5+1
                :DATPTR = R6
                :TOTFLD = R6+1
                :FLDBEG = R7
                :FLDEND = R7+1
                :TYPE = R8
A409  868A          STX :DATPTR
A40B  A970          LDA #112
A40D  8510          STA 16
A40F  8D0ED2        STA 53774 ;DISABLE BRK KEY
A412  18            CLC
A413  ADC000        LDA FLDPTR
A416  8588          STA :DATALO
A418  ADC100        LDA FLDPTR+1
A41B  8589          STA :DATAHI
A41D  A027          :LBL1 LDY #39; SET LEFT AND RIGHT
A41F  8453          STY 83; MARGINS..
A421  A000          LDY #0
A423  8452          STY 82
A425  B188          LDA (:DATALO),Y
A427  858B          STA :TOTFLD
A429  2095AD        JSR CHRRPL ;ASSURES CHR REPLACED BY CRSR MOVE IS CO
A42C  2056A6        JSR POSRTN ;POSITION CURSOR

*
A42F  A558          LDA #58 ;THIS ROUTINE SOLVES

```

```

A431 8580          STA R1      ;THE MYSTERY OF THE
A433 A559          LDA $59     ;DISAPPEARING FIRST
A435 8581          STA R1+1    ;CHARACTER
A437 A654          LDX $54
A439 CA           :LBL11      DEX
A43A 3010 ^A44C    BMI :LBL12
A43C              ADD16 #40,#0,R1,R1+1
A43C +18          CLC
A43D +A580         LDA R1
A43F +6928         ADC #40
A441 +8580         STA R1
A443 +A581         LDA R1+1
A445 +6900         ADC #0
A447 +8581         STA R1+1
A449 4C39A4        JMP :LBL11
A44C A455          :LBL12     LDY $55
A44E B180          LDA (R1),Y
A450 18           CLC
A451 6920         ADC #32
A453 2040B9        JSR PUT2
A456 A91E          LDA #30
A458 2040B9        JSR PUT2

*
A45B 20C5A5        JSR INBLNK  ;INIT BLINK RTN
A45E 206CAD        JSR KEYDLAY ;MAKE SURE KEY HAS BEEN RELEASED
A461 A9FF          :LBL2      LDA #255
A463 8DFC02        STA 764
A466 20DEA5        :L201     JSR BLNKRT
A469 A980          LDA #$80
A46B 8DB602        STA $2B6 ;SET INV INPUT FLAG
A46E A940          LDA #$40
A470 8DBE02        STA 702; SHIFT LOCK
A473 ADFC02        LDA 764
A476 20E1BF        JSR CLRKEY
A479 C9FF          CMP #255 ;KEY PRESSED?
A47B D033 ^A4B0    BNE :L202
A47D AD1FD0        LDA $D01F
A480 C906          CMP #6     ;START KEY?
A482 F01D ^A4A1    BEQ :STROUT
A484 C903          CMP #3     ;OPTION KEY?
A486 F003 ^A48B    BEQ :OPTOUT
A488 4C66A4        JMP :L201
A48B 20D5A5        :OPTOUT   JSR QTBLNK
A48E 203EA5        JSR SCREEN
A491 207EAD        JSR LSTLIN
A494 A900          LDA #0     ;CLEAR INVFLAG
A496 8DB602        STA $2B6
A499 8DCF00        STA EROFST;CLEAR ERROR OFFSET
A49C 68           PLA
A49D 68           PLA
A49E 4CB7A0        JMP OPTIONS

```



```

A4A1 20D5A5      :STROUT JSR QTBLNK
A4A4 206CAD      JSR KEYDLAY
A4A7 A900        LDA #0      ;CLEAR INVFLAG
A4A9 8DB602      STA $2B6
A4AC 60          RTS

*
A4AD 4C61A4      :BACK JMP :LBL2
*
A4B0 C986        :L202 CMP #134 ;THIS SECTION
A4B2 F010 ^A4C4  BEQ :L203 ;DISALLOWS ALL
A4B4 C987        CMP #135 ;KEYSTROKES WITH
A4B6 F00C ^A4C4  BEQ :L203 ;THE CTRL KEY
A4B8 C98E        CMP #142 ;EXCEPT CURSOR
A4BA F008 ^A4C4  BEQ :L203 ;DIRECTION KEYS
A4BC C98F        CMP #143
A4BE F004 ^A4C4  BEQ :L203
A4C0 C980        CMP #128
A4C2 10E9 ^A4AD  BPL :BACK

*
A4C4 A000        :L203 LDY #0
A4C6 BCCF00      STY EROFST
A4C9 2029B9      JSR GET1
A4CC C99B        CMP #155
A4CE F03C ^A50C  BEQ :DNCURS
A4D0 C97D        CMP #125
A4D2 F0D9 ^A4AD  BEQ :BACK
A4D4 C97E        CMP #126 ;CHANGE BKSP TO
A4D6 D002 ^A4DA  BNE :LBL21 ;CURSOR BACK
A4D8 A91E        LDA #30
A4DA C97F        :LBL21 CMP #127
A4DC F0CF ^A4AD  BEQ :BACK
A4DE C99C        CMP #156
A4E0 F0CB ^A4AD  BEQ :BACK
A4E2 C99D        CMP #157
A4E4 F0C7 ^A4AD  BEQ :BACK
A4E6 C9FE        CMP #254
A4E8 F0C3 ^A4AD  BEQ :BACK
A4EA C9FF        CMP #255
A4EC F0BF ^A4AD  BEQ :BACK
A4EE C91C        CMP #28
A4F0 F033 ^A525  BEQ :UPCURS
A4F2 C91D        CMP #29
A4F4 F016 ^A50C  BEQ :DNCURS
A4F6 C99B        CMP #155
A4F8 F012 ^A50C  BEQ :DNCURS
A4FA            :LBL22
A4FA 2040B9      JSR PUT2
A4FD A555        LDA $55
A4FF C58C        CMP :FLDBEG
A501 3022 ^A525  BMI :UPCURS
A503 C58D        CMP :FLDEND

```

```

A505 F002 ^A509      BEQ :LBL3
A507 1003 ^A50C      BPL :DNCURS
A509 4C61A4          :LBL3 JMP :LBL2
A50C A58A            :DNCURS LDA :DATPTR
A50E C58B            CMP :TOTFLD
A510 D006 ^A518      BNE :DNC1
A512 A901            LDA #1
A514 858A            STA :DATPTR
A516 1002 ^A51A      BPL :DNCOUT
A518 E68A            :DNC1 INC :DATPTR
A51A 2056A6          :DNCOUT JSR POSRTN
A51D 202BBD          JSR TONE
A520 A99E            LDA #$9E ;DOES NOTHING
A522 4CFAA4          JMP :LBL22
A525 A58A            :UPCURS LDA :DATPTR
A527 C901            CMP #1
A529 D006 ^A531      BNE :UPC1
A52B A58B            LDA :TOTFLD
A52D 858A            STA :DATPTR
A52F 1002 ^A533      BPL :UPCOUT
A531 C68A            :UPC1 DEC :DATPTR
A533 2056A6          :UPCOUT JSR POSRTN
A536 202BBD          JSR TONE
A539 A99E            LDA #$9E ;DOES NOTHING
A53B 4CFAA4          JMP :LBL22

```

EPROC

```

*
*
*
*****
*
*      SUBROUTINES
*
*****
*
*
*

```

INCLUDE D:SUBRTNS

```

A53E      SCREEN
          = 0084      CTRL0 = R3
          = 0085      CTRHI  = R3+1
          = 0086      SCRNP1  = R4
          = 0087      BUFP1   = R4+1
          = 0088      HLDA    = R5
          = 0089      SW128   = R5+1
A53E A900      LDA #SCRNBF&255
A540 8582      STA R2
A542 A906      LDA #SCRNBF/256
A544 8583      STA R2+1
A546 18        CLC

```

```

A547 A558 LDA $58
A549 6928 ADC #40
A54B 8580 STA R1
A54D A559 LDA $59
A54F 6900 ADC #0
A551 8581 STA R1+1
A553 A903 LDA #3
A555 8585 STA CTRHI
A557 A970 LDA #$70
A559 8584 STA CTRL0
A55B 8589 STA SW128
A55D D004 ^A563 BNE SCR05
A55F A900 SCR0 LDA #0
A561 8589 STA SW128
A563 A900 SCR05 LDA #0
A565 8DCE00 STA LODFLG; DISABLES CNG, DEL
A568 8586 STA SCRNP
A56A 8587 STA BUFFPT
A56C A487 SCR1 LDY BUFFPT
A56E B182 LDA (R2),Y
A570 20A2A5 JSR INBFPT - INCR R2 + BUFFPT
A573 A486 LDY SCRNP
A575 9180 STA (R1),Y
A577 C900 CMP #0
A579 F00E ^A589 BEQ SCR2
A57B A489 LDY SW128
A57D F004 ^A583 BEQ SCR15
A57F C980 CMP #128
A581 F006 ^A589 BEQ SCR2
A583 20A9A5 SCR15 JSR INSCPT
A586 4C6CA5 JMP SCR1
A589 8588 SCR2 STA HLDA
A58B A487 LDY BUFFPT
A58D B182 LDA (R2),Y
A58F 20A2A5 JSR INBFPT
A592 AA TAX
A593 A588 LDA HLDA
A595 CA SCR3 DEX
A596 F0EB ^A583 BEQ SCR15
A598 20A9A5 JSR INSCPT
A59B A486 LDY SCRNP
A59D 9180 STA (R1),Y
A59F 4C95A5 JMP SCR3

*
*
*
A5A2 E687 INBFPT INC BUFFPT
A5A4 D002 ^A5A8 BNE INBFXT
A5A6 E683 INC R2+1
A5A8 60 INBFXT RTS
*

```

```

*
*
A5A9 E686      INSCPT  INC  SCRNP1
A5AB D002 ^A5AF BNE  DECCTR
A5AD E681      INC  R1+1
A5AF C684      DECCTR  DEC  CTRLO
A5B1 D004 ^A5B7 BNE  INSCXT
A5B3 C685      DEC  CTRHI
A5B5 3001 ^A5B8 BMI  RDSCXT
A5B7 60        INSCXT  RTS
A5B8 68        RDSCXT  PLA
A5B9 68        PLA
A5BA 60        RTS

*
*
*
A5BB A21F      ZROREG  LDX  #31
A5BD A900      LDA  #0
A5BF 9580      ZRD1    STA  R1,X
A5C1 CA        DEX
A5C2 10FB ^A5BF BPL  ZRD1
A5C4 60        RTS

*
*  BLINKER ROUTINE GOES HERE
*

        INCLUDE D:BLINKER
        PROC
A5C5
= 00A0      :ADDRLO  = $A0
= 00A1      :ADDRHI  = $A1
= 00A2      :COL      = $A2
= 00A3      :ROW      = $A3
= 00A4      :HOLDLO   = $A4
= 00A5      :HOLDHI   = $A5
= 00A6      :CNTLO    = $A6
= 00A7      :CNTHI    = $A7
= 00A8      :FLAG     = $A8
= 00A9      :FIRST    = $A9
*
A5C5 A900      INBLNK  LDA  #0
A5C7 85A9      STA  :FIRST ;SET 1ST BLNK FLAG
A5C9 85A8      STA  :FLAG  ;SET UPD FLAG
A5CB A901      LDA  #1
A5CD 8DF002    STA  752    ;TURN OFF CURSOR
A5D0 85A6      STA  :CNTLO ;INIT COUNT
A5D2 85A7      STA  :CNTHI
A5D4 60        RTS

*
A5D5 A000      QTBLNK  LDY  #0
A5D7 B1A4      LDA  (:HOLDLO),Y
A5D9 0980      ORA  #$80
A5DB 91A4      STA  (:HOLDLO),Y

```

```

A5DD 60 RTS
*
A5DE A5A9 BLNKRT LDA :FIRST
A5E0 F065 ^A647 BEQ :UPD2
A5E2 A5A3 LDA :ROW
A5E4 4554 EOR $54
A5E6 D055 ^A63D BNE :UPD
A5E8 A5A2 LDA :COL
A5EA 4555 EOR $55
A5EC D04F ^A63D BNE :UPD
A5EE C6A6 DEC :CNTLO
A5F0 D04A ^A63C BNE :OUT
A5F2 C6A7 DEC :CNTHI
A5F4 D046 ^A63C BNE :OUT
A5F6 A914 :RENTL LDA #20
A5F8 85A7 STA :CNTHI
A5FA A559 :TOP LDA $59
A5FC 85A1 STA :ADDRHI
A5FE A558 LDA $58
A600 85A0 STA :ADDRLO
A602 A454 LDY $54
A604 88 :LBL1 DEY
A605 3010 ^A617 BMI :LBL2
A607 ADD16 #40,#0,:ADDRLO,:ADDRHI
A607 +18 CLC
A608 +A5A0 LDA :ADDRLO
A60A +6928 ADC #40
A60C +85A0 STA :ADDRLO
A60E +A5A1 LDA :ADDRHI
A610 +6900 ADC #0
A612 +85A1 STA :ADDRHI
A614 4C04A6 JMP :LBL1
A617 :LBL2 ADD16 $55,#0,:ADDRLO,:ADDRHI
A617 +18 CLC
A618 +A5A0 LDA :ADDRLO
A61A +6555 ADC $55
A61C +85A0 STA :ADDRLO
A61E +A5A1 LDA :ADDRHI
A620 +6900 ADC #0
A622 +85A1 STA :ADDRHI
A624 A5A8 LDA :FLAG
A626 D00C ^A634 BNE :LBL3
A628 A5A0 LDA :ADDRLO
A62A 85A4 STA :HOLDLO
A62C A5A1 LDA :ADDRHI
A62E 85A5 STA :HOLDHI
A630 A901 LDA #1
A632 85A8 STA :FLAG
A634 A000 :LBL3 LDY #0
A636 B1A0 LDA (:ADDRLO),Y
A638 4980 EOR #$80

```

```

A63A 91A0          STA (:ADDRLO),Y
A63C 60           :OUT   RTS
A63D A000          :UPD   LDY #0
A63F 84A8          STY :FLAG
A641 B1A4          LDA (:HOLDLO),Y
A643 0980          ORA #$80
A645 91A4          STA (:HOLDLO),Y
A647 A554          :UPD2  LDA $54
A649 85A3          STA :ROW
A64B A555          LDA $55
A64D 85A2          STA :COL
A64F A901          LDA #1
A651 85A9          STA :FIRST
A653 4CF6A5        JMP :RENTR

*
*               EPROC
*
*
*
A656 A48A        POSRTN LDY R6 ;THIS ROUTINE MPYS THE
A658 88          DEY      ;DATAPTR BY 4 FOR IDX
A659 98          TYA
A65A 0A          ASL A
A65B 0A          ASL A
A65C A8          TAY
A65D C8          INY
A65E B188        LDA (R5),Y ;GET TYPE
A660 858E        STA R8
A662 C8          INY
A663 B188        LDA (R5),Y ;GET COL
A665 858C        STA R7      ;STORE FOR FLDBEG
A667 858D        STA R7+1    ;FOR FLDEND
A669 18          CLC
A66A 6DCF00      ADC EROFST ;ERROR OFFSET FROM STOREDIT
A66D 8555        STA $55
A66F C8          INY
A670 B188        LDA (R5),Y ;GET ROW
A672 8554        STA $54
A674 C8          INY
A675 B188        LDA (R5),Y ;GET FLD LENGTH
A677 18          CLC
A678 658D        ADC R7+1    ;ADD TO FLDEND
A67A 858D        STA R7+1
A67C C68D        DEC R7+1
A67E 60          RTS

*
*               MESSAGE RTN FOLLOWS
*
*               INCLUDE D:MESSAGES
A67F MESSAGES
A67F PROC

```

```

= 0098      :SCRNLO = R13
= 0099      :SCRNHI = R13+1
= 009A      :BUFFLO = R14
= 009B      :BUFFHI = R14+1
= 009C      :MASK   = R15
= 009D      :MRGN   = R15+1
= 009E      :ADDER   = R16

A67F A948      LDA #$48
A681 E01B      CPX #27; GREATER THAN 26?
A683 B002 ^A687 BCS :LBL0
A685 A998      MSGS1 { LDA #$98
A687 859E      :LBL0 { STA :ADDER
A689 A558      LDA $58
A68B 8598      STA :SCRNLO
A68D A559      LDA $59
A68F 8599      STA :SCRNHI
A691 A9A6      LDA #MSGBUF/256
A693 859B      STA :BUFFHI
A695 A9F1      LDA #MSGBUF&255
A697 859A      STA :BUFFLO
A699 A000      LDY #0
A69B CA        :LBL1 DEX
A69C F00F ^A6AD BEQ :LBL2
A69E B19A      LDA (:BUFFLO),Y
A6A0 297F      AND #$7F
A6A2 18        CLC
A6A3 659A      ADC :BUFFLO
A6A5 859A      STA :BUFFLO
A6A7 90F2 ^A69B BCC :LBL1
A6A9 E69B      INC :BUFFHI
A6AB B0EE ^A69B BCS :LBL1
A6AD B19A      :LBL2 LDA (:BUFFLO),Y
A6AF AA        TAX
A6B0 1010 ^A6C2 BPL :LBL3
A6B2 297F      AND #$7F
A6B4 AA        TAX
A6B5 18        CLC
A6B6 A598      LDA :SCRNLO
A6B8 659E      ADC :ADDER
A6BA 8598      STA :SCRNLO
A6BC A599      LDA :SCRNHI
A6BE 6903      ADC #3
A6C0 8599      STA :SCRNHI
A6C2 C8        :LBL3 INY
A6C3 B19A      LDA (:BUFFLO),Y
A6C5 297F      AND #$7F
A6C7 859D      STA :MRGN
A6C9 B19A      LDA (:BUFFLO),Y
A6CB 2980      AND #$80
A6CD 859C      STA :MASK
A6CF A027      LDY #39

```

```

A6D1  9198      :LBL4 STA (:SCRNLO),Y
A6D3  88        DEY
A6D4  10FB ^A6D1 BPL :LBL4
A6D6  18        CLC
A6D7  A59D      LDA :MRGN
A6D9  6598      ADC :SCRNLO
A6DB  8598      STA :SCRNLO
A6DD  8A        TXA
A6DE  A8        TAY
A6DF  88        :LBL5 DEY
A6E0  C001      CPY #1
A6E2  F00C ^A6F0 BEQ :LBL6
A6E4  B19A      LDA (:BUFFLO),Y
A6E6  38        SEC
A6E7  E920      SBC #32
A6E9  059C      ORA :MASK
A6EB  9198      STA (:SCRNLO),Y
A6ED  4CDA6     JMP :LBL5
A6F0  60        :LBL6 RTS
          EPROC

```

*

* EXPLANATION OF MSGBUF CODES:

*

* FIRST BYTE -

* HIGH BIT: 1 = BOTTOM SCREEN

* 0 = TOP OF SCREEN

* REMAINDER: STRING LENGTH +2

*

* SECOND BYTE -

* HIGH BIT: 1 = INVERSE

* 0 = NORMAL

* REMAINDER: LEFT MARGIN -2

*

```

A6F1  2501C65744 MSGBUF ( DB $25,1,$C6,'WD ', $C2,'WD ', $D2,'ST ', $D3,'CH ', $C:
A716  9389424547 2 DB $93,$89,'BEGINNING OF FILE'
A729  8D8C454E44 3 DB $8D,$8C,'END OF FILE'
A736  8D8C4D454D 4 DB $8D,$8C,'MEMORY FULL'
A743  8C8D454D50 5 DB $8C,$8D,'EMPTY FILE'
A74F  9B85545950 6 DB $9B,$85,'TYPE ', $27,'Y', $27,' TO DELETE RECORD'
A76A  99864E4F20 7 DB $99,$86,'NO SEARCH KEY SPECIFIED'
A783  1A86435245 8 DB $1A,$86,'CREATE DATA ENTRY SCREEN'
A79D  A381454E54 9 DB $A3,$81,'ENTER SEARCH KEY THEN PRESS START'
A7C0  A083505245 10 DB $A0,$83,'PRESS START TO CONTINUE SEARCH'
* ----- 10 -----
A7E0  9C854D5553 11 DB $9C,$85,'MUST HAVE RECORD DISPLAYED'
A7FC  9588454E54 12 DB $95,$88,'ENTRY REQUIRED HERE'
A811  9D84494E56 13 DB $9D,$84,'INVALID CHARACTER IN NUMBER'
A82E  9B85454E54 14 DB $9B,$85,'ENTER PRINT CONTROL CODES'
A849  A400484F57 15 DB $A4,0,'HOW MANY LINES BETWEEN RECORDS? ', $A0,$A0
A86D  91004C4546 16 DB $91,0,'LEFT MARGIN? ', $A0,$A0
A87E  0200      17 DB 2,0; THIS BLANKS TOP LINE

```



```

A880 2600C54E54      DB $26,0,$C5,'NTER  ', $D2,'ETRV  ', $D3,'AVE  ', $C6,
A8A6 A6804D454D      DB $A6,$80,'MEMORY AVAILABLE: ' MORE RECORDS'
A8CC 8F8C434845      DB $8F,$8C,'CHECK PRINTER' -
* ----- 20 -----
A8DB 8C0046494C      21 DB $8C,0,'FILE NAME:'
A8E7 1805C34841      22 DB $18,5,$C3,'HANGE FORMAT- ', $D0,'RINT'
A8FF 1D832A2046      23 DB $1D,$83,'* FILE NAMES DO NOT MATCH *'
A91C A600544849      24 DB $A6,0,'THIS DISK: ' CONTINUE? (Y/N)'
A942 93894E4F20      25 DB $93,$89,'NO FIELDS DEFINED'
A955 918A544F4F      26 DB $91,$8A,'TOO MANY FIELDS'
A966 9688434153      27 DB $96,$88,'CASSETTE INPUT ERROR'
A97C 8200            28 DB $82,0,'BLANK BOTTOM LINE'
A97E 958857524F      DB $95,$88,'WRONG DISK IN DRIVE'
A993 898E534F52      DB $89,$8E,'SORTING'

```

```

*
*
*

```

```

A99C          PROC
A99C          WRDATA
          = 0301      DUNIT      = $301
          = 0302      DCOMND     = $302
          = 0303      DSTATS     = $303
          = 0304      DBUFLO     = $304
          = 0305      DBUFHI     = $305
          = 030A      DSECL0     = $30A
          = 030B      DSECHI     = $30B
          = E453      DSKINV     = $E453
          = 0080      :BUFFER    = R1
          = 0082      :SECPTR    = R2
          = 0084      :SCRNBF    = R3
          = 0086      :NMFLG     = R4
          = 0087      :MATCH     = R4+1
A99C 202BAA          JSR :DSKIO
A99F AD0303          LDA DSTATS
A9A2 C901            CMP #1
A9A4 F003 ^A9A9      BEQ :DSKOT
A9A6 4CAAAA          JMP :TAPOT
A9A9 203CAA          :DSKOT JSR :DSKOK
A9AC 20C6AA          JSR :GETNM
A9AF 2070AA          JSR :INTPTR
A9B2 A957            LDA #$57
A9B4 8D0203          STA DCOMND
A9B7 A000            :L10      LDY #0
A9B9 B180            :L11      LDA (:BUFFER),Y
A9BB 990004          STA $400,Y
A9BE C99B            CMP #EOL
A9C0 D006 ^A9C8      BNE :L12
A9C2 201DAA          JSR :SECTOR
A9C5 A200            LDX #0
A9C7 60              RTS

```

```

A9C8 C8 :L12 INY
A9C9 C080 CPY #128
A9CB F003 ^A9D0 BEQ :L20
A9CD 4CB9A9 JMP :L11
A9D0 201DAA :L20 JSR :SECTOR
A9D3 2081AA JSR :INCPTR
A9D6 4CB7A9 JMP :L10
*
A9D9 202BAA RDDATA JSR :DSKIO
A9DC AD0303 LDA DSTATS
A9DF C901 CMP #1
A9E1 F00A ^A9ED BEQ :DSKIN
*
A9E3 2015BA JSR CASIN
A9E6 A630 LDX STATUS
A9E8 F002 ^A9EC BEQ :L25
A9EA A21B LDX #27
A9EC 60 :L25 RTS
*
A9ED 203CAA :DSKIN JSR :DSKOK
A9F0 20B8AA JSR :NMSEC
A9F3 AD0804 LDA $408
A9F6 D003 ^A9FB BNE :L29
A9F8 2066AA JSR :UHOH; IT WONT RTN HERE!
A9FB 2070AA :L29 JSR :INTPTR
A9FE 201DAA :L30 JSR :SECTOR
AA01 A000 LDY #0
AA03 B90004 :L31 LDA $400,Y
AA06 9180 STA (:BUFFER),Y
AA08 C99B CMP #EOL
AA0A D006 ^AA12 BNE :L32
AA0C 2095AD JSR CHRRPL
AA0F A200 LDX #0
AA11 60 RTS
AA12 C8 :L32 INY
AA13 C080 CPY #128
AA15 D0EC ^AA03 BNE :L31
AA17 2081AA JSR :INCPTR
AA1A 4CFEA9 JMP :L30
*
AA1D A582 :SECTOR LDA :SECPTR
AA1F 8D0A03 STA DSECL0
AA22 A583 LDA :SECPTR+1
AA24 8D0B03 STA DSECHI
AA27 2053E4 JSR DSKINV
AA2A 60 RTS
*
AA2B A901 :DSKIO LDA #1
AA2D 8D0103 STA DUNIT
AA30 A953 LDA #$53
AA32 8D0203 STA DCOMND

```

```

AA35 2053E4      JSR DSKINV
AA38 2053E4      JSR DSKINV
AA3B 60          RTS

*
AA3C A952        :DSKOK LDA #$52
AA3E 8D0203      STA DCOMND
AA41 A900        LDA #0
AA43 8D0403      STA DBUFLO
AA46 A904        LDA #4
AA48 8D0503      STA DBUFHI
AA4B A968        LDA #$68
AA4D 8D0A03      STA DSECL0
AA50 A901        LDA #1
AA52 8D0B03      STA DSECHI
AA55 2053E4      JSR DSKINV
AA58 AD0304      LDA $403
AA5B C9C3        CMP #$C3
AA5D D007 ^AA66  BNE :UHOH
AA5F AD0404      LDA $404
AA62 C902        CMP #2
AA64 F009 ^AA6F  BEQ :OK
AA66             :UHOH
AA66 A21D        :UHOH1 LDX #29
AA68 869C        STX MSGFLG ;USED IN DSGNSCRN
AA6A 2095AD      JSR CHRRPL
AA6D 68          PLA
AA6E 68          PLA
AA6F 60          :OK   RTS

*
AA70 A900        :INTPTR LDA #SCRNBF&,$FF
AA72 8580        STA :BUFFER
AA74 A906        LDA #SCRNBF/256
AA76 8581        STA :BUFFER+1
AA78 A905        LDA #5
AA7A 8582        STA :SECPTR
AA7C A900        LDA #0
AA7E 8583        STA :SECPTR+1
AA80 60          RTS

*
AA81             :INCPTR ADD16 #128,#0,:BUFFER,:BUFFER+1
AA81 +18         CLC
AA82 +A580       LDA :BUFFER
AA84 +6980       ADC #128
AA86 +8580       STA :BUFFER
AA88 +A581       LDA :BUFFER+1
AA8A +6900       ADC #0
AA8C +8581       STA :BUFFER+1
AA8E             ADD16 #1,#0,:SECPTR,:SECPTR+1
AA8E +18         CLC
AA8F +A582       LDA :SECPTR
AA91 +6901       ADC #1

```

```

AA93 +8582          STA :SECPTR
AA95 +A583          LDA :SECPTR+1
AA97 +6900          ADC #0
AA99 +8583          STA :SECPTR+1
AA9B A583           LDA :SECPTR+1
AA9D C901           CMP #1
AA9F D008 ^AAA9     BNE :L21
AAA1 A582           LDA :SECPTR
AAA3 C968           CMP #$68
AAA5 D002 ^AAA9     BNE :L21
AAA7 E682           INC :SECPTR
AAA9 60             :L21 RTS
                  *
AAAA A900           :TAPOT LDA #0
AAAC 8524           STA ICBALZ
AAAE A906           LDA #6
AAB0 8525           STA ICBALZ
AAB2 2059B9         JSR CASOUT
AAB5 A200           LDX #0
AAB7 60             RTS
                  *
                  *
AAB8 A904           :NMSEC LDA #4
AABA 8D0A03         STA DSECLO
AABD A900           LDA #0
AABF 8D0B03         STA DSECHI
AAC2 2053E4         JSR DSKINV
AAC5 60             RTS
                  *
AAC6 20B8AA         :GETNM JSR :NMSEC
AAC9 A900           LDA #0
AACB 8586           STA :NMFLG
AACD A008           LDY #8
ACAF 88             :L40 DEY
AAD0 3009 ^AADB     BMI :L41
AAD2 B90004         LDA $400,Y
AAD5 C900           CMP #0
AAD7 F0F6 ^AACF     BEQ :L40
AAD9 E686           INC :NMFLG
AADB A215           :L41 LDX #21
AADD 207FA6         JSR MESSAGES
AAE0 A917           LDA #23
AAE2 8554           STA $54
AAE4 A90E           LDA #14
AAE6 8555           STA $55
AAE8 A900           LDA #0
AAEA 8DF002         STA 752
AAED 8DB602         STA 694 ;INVFLG
AAF0 A9FF           LDA #$FF
AAF2 85BE           STA HOLDX
AAF4 2095AD         JSR CHRRPL ;ASSURES CHR REPLACED BY CRSR MOVE IS CO:

```

```
*
* THIS SECTION SCREENS OUT UNWANTED
* KEYSTROKES AND LIMITS FILE NAME
* TO EIGHT CHARACTERS.
*
```

```
AAF7 A91E LDA #30
AAF9 4C1BAB JMP :L502
AAFC A9FF :L50 LDA #$FF
AAFE 8DFC02 STA 764
AB01 ADFC02 :L501 LDA 764
AB04 C9FF CMP #$FF
AB06 F0F9 ^AB01 BEQ :L501
AB08 C986 CMP #134; CURS LEFT
AB0A F008 ^AB14 BEQ :L5015
AB0C C987 CMP #135; CURS RIGHT
AB0E F004 ^AB14 BEQ :L5015
AB10 C940 CMP #64
AB12 B0E8 ^AAFC BCS :L50
AB14 2029B9 :L5015 JSR GET1
AB17 C99B CMP #155
AB19 F024 ^AB3F BEQ :L51
AB1B A655 :L502 LDX $55
AB1D E015 CPX #21
AB1F D00E ^AB2F BNE :L503
AB21 C91E CMP #30; CURSOR BACK
AB23 F00A ^AB2F BEQ :L503
AB25 C97E CMP #126; BACK SPACE
AB27 F006 ^AB2F BEQ :L503
AB29 2028BD JSR TONE
AB2C 4CFCAA JMP :L50
AB2F 2040B9 :L503 JSR PUT2
AB32 A655 LDX $55
AB34 E00C CPX #12
AB36 D0C4 ^AAFC BNE :L50; GO BACK
AB38 2028BD JSR TONE
AB3B A91F LDA #31
AB3D D0DC ^AB1B BNE :L502

*
AB3F A901 :L51 LDA #1
AB41 8DF002 STA 752
AB44 A91F LDA #31
AB46 2040B9 JSR PUT2
AB49 18 CLC
AB4A A558 LDA $58
AB4C 69A5 ADC #$A5
AB4E 8584 STA :SCRNBF
AB50 A559 LDA $59
AB52 6903 ADC #3
AB54 8585 STA :SCRNBF+1
AB56 A007 LDY #7
AB58 8487 STY :MATCH
```

```

AB5A B184          :L52    LDA (:SCRNBF),Y
AB5C D90004        CMP $400,Y
AB5F F004 ^AB65    BEQ :L53
AB61 A200          LDX #0
AB63 8687          STX :MATCH
AB65 990804        :L53    STA $408,Y
AB68 88            DEY
AB69 10EF ^AB5A    BPL :L52
AB6B A686          LDX :NMFLG
AB6D F03C ^ABAB    BEQ :L59
AB6F A687          LDX :MATCH
AB71 F00E ^AB81    BEQ :L55
AB73 A9FF          :L54    LDA #$FF
AB75 8D0804        STA $408; NON-EMPTY DISK FLAG
AB78 A957          LDA #$57
AB7A 8D0203        STA DCOMND
AB7D 2053E4        JSR DSKINV
AB80 60            RTS
AB81 A217          :L55    LDX #23
AB83 207FA6        JSR MESSAGES
AB86 A218          LDX #24
AB88 207FA6        JSR MESSAGES
AB8B 18            CLC          ;THIS RTN MOVES
AB8C A558          LDA $58      ;FILE NAME TO MSG
AB8E 69A5          ADC #$A5     ;WINDOW
AB90 859A          STA R14
AB92 A559          LDA $59
AB94 6903          ADC #3
AB96 859B          STA R14+1
AB98 A007          LDY #7
AB9A B90004        :L57    LDA $400,Y
AB9D 919A          STA (R14),Y
AB9F 88            DEY
ABA0 10F8 ^AB9A    BPL :L57
ABA2 2095AD        :L58    JSR CHRRPL
ABA5 2091BC        JSR BEEP
ABA8 20B9AB        JSR :YESNO
ABAB A007          :L59    LDY #7
ABAD B90804        :L60    LDA $408,Y
ABB0 990004        STA $400,Y
ABB3 88            DEY
ABB4 10F7 ^ABAD    BPL :L60
ABB6 4C73AB        JMP :L54

*
ABB9 A9FF          :YESNO   LDA #$FF
ABBB 8DFC02        STA 764
ABBE ADFC02        :YES1    LDA 764
ABC1 C9FF          CMP #$FF
ABC3 F0F9 ^ABBE    BEQ :YES1
ABC5 C92B          CMP #$2B; Y
ABC7 D001 ^ABCA    BNE :YES2

```

```

ABC9  60          RTS
ABCA  68          :YES2 PLA
ABCB  68          PLA
ABCC  68          PLA
ABCD  68          PLA
ABCE  207EAD      JSR LSTLIN
ABD1  A200        LDX #0; MSG FLAG UPON RETURN
ABD3  60          RTS

```

```

*
EPROC
*
*   STORE AND EDIT RTN GOES HERE
*
INCLUDE D:STOREDIT
PROC

```

ABD4
ABD4

```

STORDAT
= 0090      :BUFFLO = R9
= 0091      :BUFFHI = R9+1
= 0092      :SCRNLO = R10
= 0093      :SCRNHI = R10+1
= 0094      :BUFFPT = R11
= 0095      :SCRNPT = R11+1
= 0096      :CTRLO  = R12
= 0097      :CTRHI  = R12+1
= 0080      :EDFLG  = R1
= 0081      :EDTYP  = R1+1
= 0082      :DECPT  = R2
= 0083      :NGSGN  = R2+1
= 0084      :INDEX  = R3
= 0085      :SPACE  = R3+1
= 0086      :FLDPT  = R4
= 0087      :HOLDA  = R4+1
= 0088      :SPAC2  = R5

```

```

*
*   THIS RTN CHECKS TO SEE IF THERE
*   IS ENOUGH ROOM IN MEMORY FOR
*   ANOTHER RECORD.
*

```

```

ABD4  18          CLC
ABD5  ADC400      LDA BUFEND
ABD8  6DC600      ADC RECLNG
ABDB  8590        STA :BUFFLO
ABDD  ADC500      LDA BUFEND+1
ABE0  6DC700      ADC RECLNG+1
ABE3  8591        STA :BUFFHI
ABE5  CDE602      CMP MEMTOP+1
ABE8  9012 ^ABFC  BCC :LBL1
ABEA  F006 ^ABF2  BEQ :LBL05
ABEC  A204        :LBL01 LDX #4
ABEE  207FA6      JSR MESSAGES
ABF1  60          RTS

```

```

ABF2  A590      :LBL05  LDA :BUFFLO
ABF4  CDE502      CMP MEMTOP
ABF7  9003 ^ABFC      BCC :LBL1
ABF9  4CECAB      JMP :LBL01

*
ABFC  ADC400      :LBL1  LDA BUFEND      ;SET PTR TO
ABFF  8590      STA :BUFFLO      ;CURRENT EOF
AC01  ADC500      LDA BUFEND+1      ;TO ADD NEW
AC04  8591      STA :BUFFHI      ;RECORD

*
* THE FOLLOWING SECTION OF THIS RTN
* IS ALSO USED TO CHANGE DATA. IT IS
* CALLED FROM THE RETREV RTN.
*
AC06  A000      CHNGDAT LDY #0
AC08  8494      STY :BUFFPT

*
AC0A  A901      LDA #1      ;INIT ED FLAGS
AC0C  8584      STA :INDEX
AC0E  A900      LDA #0
AC10  8586      STA :FLDPT
AC12  8580      STA :EDFLG

*
AC14  A559      LDA $59
AC16  8593      STA :SCRNHI
AC18  A558      LDA $58
AC1A  8592      STA :SCRNLO
AC1C  A050      LDY #80
AC1E  8495      STY :SCRNPT ;SKIP FRST 2 LNS

*
AC20  A948      LDA #$48 ;INIT SCREEN CTR
AC22  8596      STA :CTRLO
AC24  A903      LDA #3
AC26  8597      STA :CTRHI

*
AC28  A495      :LBL2  LDY :SCRNPT
AC2A  B192      LDA (:SCRNLO),Y
AC2C  8587      STA :HOLDA
AC2E  20B4AC     JSR EDDATA
AC31  A587      LDA :HOLDA
AC33  2980      AND #$80
AC35  F00C ^AC43 BEQ :LBL3
AC37  A587      LDA :HOLDA
AC39  38        SEC      ;TAKE THESE OUT
AC3A  E960      SBC #96 ;LATER!
AC3C  A494      LDY :BUFFPT
AC3E  9190      STA (:BUFFLO),Y
AC40  2049AC     :LBL21 JSR :INBFPT
AC43  2050AC     :LBL3  JSR :INSCPT
AC46  4C28AC     JMP :LBL2

*

```



```

AC49 E694      :INBFPT INC :BUFFPT
AC4B D002 ^AC4F      BNE :INBFXT
AC4D E691      INC :BUFFHI
AC4F 60        :INBFXT RTS
*
AC50 E695      :INSCPT INC :SCRNPT
AC52 D002 ^AC56      BNE :DECCTR
AC54 E693      INC :SCRNHI
AC56 C696      :DECCTR DEC :CTRLO
AC58 D004 ^AC5E      BNE :INSCXT
AC5A C697      DEC :CTRHI
AC5C 3001 ^AC5F      BMI :STORXT
AC5E 60        :INSCXT RTS
*
AC5F ADCD00      :STORXT LDA CHNFLG
AC62 D03E ^ACA2      BNE :EXIT
AC64 A99B      LDA #EOL
AC66 A494      LDY :BUFFPT
AC68 9190      STA (:BUFFLO),Y
AC6A          ADD16 RECLNG,RECLNG+1,BUFEND,BUFEND+1
AC6A +18       CLC
AC6B +ADC400    LDA BUFEND
AC6E +6DC600    ADC RECLNG
AC71 +8DC400    STA BUFEND
AC74 +ADC500    LDA BUFEND+1
AC77 +6DC700    ADC RECLNG+1
AC7A +8DC500    STA BUFEND+1
AC7D F8        SED
AC7E A000      LDY #0
AC80 B1D0      LDA (CNTPTR),Y
AC82 6901      ADC #1
AC84 91D0      STA (CNTPTR),Y
AC86 C8        INY
AC87 B1D0      LDA (CNTPTR),Y
AC89 6900      ADC #0
AC8B 91D0      STA (CNTPTR),Y
AC8D D8        CLD
AC8E          ADD16 #1,#0,RECCNT,RECCNT+1
AC8E +18       CLC
AC8F +ADC800    LDA RECCNT
AC92 +6901      ADC #1
AC94 +8DC800    STA RECCNT
AC97 +ADC900    LDA RECCNT+1
AC9A +6900      ADC #0
AC9C +8DC900    STA RECCNT+1
AC9F 203EA5    JSR SCREEN
ACA2 207EAD      :EXIT JSR LSTLIN
ACA5 A900      LDA #0
ACA7 8DCD00    STA CHNFLG
ACAA 8DCF00    STA EROFST ;CLR ERROR OFFSET
ACAD A201      LDY #1

```

```

ACAF  A000          LDY #0 ;FLAG TO CHNG RTN
ACB1  68           PLA
ACB2  68           PLA
ACB3  60           RTS

*
ACB4  2980          EDDATA AND ##80
ACB6  D021 ^ACD9    BNE :LBL40 ;INV CHR?
ACB8  A580          LDA :EDFLG ;FIRST BLANK PAST
ACBA  F050 ^AD0C    BEQ :EDOUT ;DATA FIELD?
ACBC  A900          LDA #0
ACBE  8580          STA :EDFLG ;CLEAR EDIT FLAG
ACC0  8DCF00        STA EROFST ;CLR ERROR OFFSET
ACC3  A585          LDA :SPACE ;PREV FLD BLANK?
ACC5  D045 ^AD0C    BNE :EDOUT
ACC7  A581          LDA :EDTYP ;CAN PREV FLD BE
ACC9  C9A3          CMP ##A3 ;BLANK?
ACCB  D03F ^AD0C    BNE :EDOUT
ACCD  A20C          LDX #12 ;DISP ERROR MSG
ACCF  207FA6        JSR MESSAGES ENTRY REQUIRED
ACD2  68           PLA
ACD3  68           PLA
ACD4  A686          LDX :FLDPT;SET PTR FOR ENTDAT
ACD6  A001          LDY #1 ;FLAG TO CHNG RTN
ACD8  60           RTS
ACD9  A580          :LBL40 LDA :EDFLG
ACDB  D021 ^ACFE    BNE :LBL45
ACDD  A901          LDA #1
ACDF  8580          STA :EDFLG
ACE1  A484          LDY :INDEX
ACE3  B1C0          LDA (FLDPTR),Y ; GET FLD TYPE
ACE5  8581          STA :EDTYP
ACE7  E684          INC :INDEX
ACE9  E684          INC :INDEX
ACEB  E684          INC :INDEX
ACED  E684          INC :INDEX
ACEF  E686          INC :FLDPT
ACF1  A900          LDA #0
ACF3  8582          STA :DECPT
ACF5  8583          STA :NGSGN
ACF7  8585          STA :SPACE
ACF9  8588          STA :SPAC2
ACFB  8DCF00        STA EROFST
ACFE  A581          :LBL45 LDA :EDTYP
AD00  C980          CMP ##80
AD02  F008 ^AD0C    BEQ :EDOUT
AD04  C9A3          CMP ##A3 ;INV C
AD06  F005 ^AD0D    BEQ :CHAR
AD08  C9AE          CMP ##AE ;INV N
AD0A  F00E ^AD1A    BEQ :NUMR
AD0C  60           :EDOUT RTS
AD0D  A587          :CHAR LDA :HOLDA ;GET CHR FROM HOLD

```

```

AD0F C980          CMP #$80 ; IS IT A BLANK?
AD11 F0F9 ^AD0C    BEQ :EDOUT
AD13 A901          LDA #1
AD15 8585          STA :SPACE
AD17 4C0CAD        JMP :EDOUT
AD1A A587          : NUMR LDA :HOLDA
AD1C C980          CMP #$80
AD1E D00A ^AD2A    BNE :LBL50
AD20 A485          LDY :SPACE
AD22 F036 ^AD5A    BEQ :LBL60
AD24 A001          LDY #1
AD26 8488          STY :SPAC2
AD28 D030 ^AD5A    BNE :LBL60
AD2A A488          : LBL50 LDY :SPAC2
AD2C D032 ^AD60    BNE :NUMER
AD2E C98D          CMP #$8D ; NEG SIGN
AD30 302E ^AD60    BMI :NUMER
AD32 C99A          CMP #$9A ; COLON
AD34 102A ^AD60    BPL :NUMER
AD36 C98F          CMP #$8F ; SLASH
AD38 F026 ^AD60    BEQ :NUMER
AD3A C98E          CMP #$8E ; DEC POINT
AD3C D008 ^AD46    BNE :LBL55
AD3E A482          LDY :DECPT
AD40 D01E ^AD60    BNE :NUMER
AD42 A001          LDY #1
AD44 8482          STY :DECPT
AD46 C98D          : LBL55 CMP #$8D ; NEG SIGN
AD48 D00C ^AD56    BNE :LBL57
AD4A A485          LDY :SPACE
AD4C D012 ^AD60    BNE :NUMER
AD4E A483          LDY :NGSGN
AD50 D00E ^AD60    BNE :NUMER
AD52 A001          LDY #1
AD54 8483          STY :NGSGN
AD56 A001          : LBL57 LDY #1
AD58 8485          STY :SPACE
AD5A EECF00        : LBL60 INC EROFST
AD5D 4C0CAD        JMP :EDOUT
AD60 A20D          : NUMR LDX #13
AD62 207FA6        JSR MESSAGES
AD65 A686          LDX :FLDPT
AD67 A001          LDY #1
AD69 68           PLA
AD6A 68           PLA
AD6B 60           RTS
                EPROC

```

INVALID IN NUMBER

*
*
*

```

AD6C          KEYDLAY
AD6C  A214          LDX #20
AD6E  A000          LDY #0
AD70  88            KEY1  DEY
AD71  D0FD ^AD70    BNE KEY1
AD73  CA            DEX
AD74  D0FA ^AD70    BNE KEY1
AD76  AD1FD0        LDA 53279
AD79  C907          CMP #7
AD7B  30EF ^AD6C    BMI KEYDLAY
AD7D  60            RTS

*
*
*

AD7E          PROC
AD7E          LSTLIN
AD7E  18            CLC
AD7F  A558          LDA $58 ;THIS SECTION SETS A
AD81  6998          ADC #$98;POINTER TO POINT AT
AD83  8580          STA R1 ;LAST LINE OF SCREEN
AD85  A559          LDA $59
AD87  6903          ADC #3
AD89  8581          STA R1+1
AD8B  A027          LDY #39
AD8D  A980          LDA #$80
AD8F  9180          :LBL1 STA (R1),Y ;INV BLANK ON
AD91  88            DEY ;LAST LINE
AD92  10FB ^AD8F    BPL :LBL1
AD94  60            RTS

*
*

AD95  A55E          CHRRPL LDA $5E ;THIS RTN ASSURES
AD97  8598          STA R13 ;THAT THE CHARACTER
AD99  A55F          LDA $5F ;REPLACED BY THE
AD9B  8599          STA R13+1 ;CURSOR MOVEMENT
AD9D  A000          LDY #0 ;BE THE CORRECT ONE
AD9F  B198          LDA (R13),Y
ADA1  855D          STA $5D
ADA3  60            RTS

          INCLUDE D:SUBRTNS2

ADA4          POINTERS
          = 00B2      PRFORM = $B2
          = 00C0      FLDPTR = $C0
          = 00C2      BUFTOP = $C2
          = 00C4      BUFEND = $C4
          = 00C6      RECLNG = $C6
          = 00C8      RECCNT = $C8
          = 00CA      CURPTR = $CA
          = 00CC      BROWSE = $CC
          = 00CD      CHNFLG = $CD

```

```

= 00CE      LODFLG = $CE
= 00CF      EROFST = $CF
= 00D0      CNTPTR = $D0
= 00D2      SUMFLG = $D2
= 00D3      AVGFLG = $D3

ADA4        PROC
ADA4 18      CLC          ;ESTAB POINTER TO
ADA5 A582    LDA R2      ;BEGIN OF FLD DATA
ADA7 6587    ADC R4+1    ;AFTER SCREEN DATA
ADA9 85C0    STA FLDPTR
ADAB A583    LDA R2+1
ADAD 6900    ADC #0
ADAF 85C1    STA FLDPTR+1

*
ADB1 A000    LDY #0      ;MULT FLDCNT
ADB3 B1C0    LDA (FLDPTR),Y ;BY 4 TO STEP
ADB5 0A      ASL A       ;OVR FLD DATA
ADB6 0A      ASL A
ADB7 A8      TAY

*
ADB8 C8      INY         ;GET AND CON-
ADB9 B1C0    LDA (FLDPTR),Y ;VERT RECORD
ADBB 85BB    STA CONREG   ;LENGTH
ADBD C8      INY
ADBE B1C0    LDA (FLDPTR),Y
ADC0 85BC    STA CONREG+1
ADC2 2036AE  JSR CONVERT
ADC5 A5BB    LDA CONREG
ADC7 85C6    STA RECLNG
ADC9 A5BC    LDA CONREG+1
ADCB 85C7    STA RECLNG+1

*
ADCD C8      INY         ;GET AND CON-
ADCE 18      CLC         ;VERT RECORD
ADCF 98      TYA         ;COUNT
ADD0 65C0    ADC FLDPTR
ADD2 85D0    STA CNTPTR
ADD4 A900    LDA #0
ADD6 65C1    ADC FLDPTR+1
ADD8 85D1    STA CNTPTR+1
ADDA B1C0    LDA (FLDPTR),Y
ADDC 85BB    STA CONREG
ADDE C8      INY
ADDF B1C0    LDA (FLDPTR),Y
ADE1 85BC    STA CONREG+1
ADE3 2036AE  JSR CONVERT
ADE6 A5BB    LDA CONREG
ADE8 85C8    STA RECCNT
ADEA A5BC    LDA CONREG+1
ADEC 85C9    STA RECCNT+1

*

```

```

ADEE C8          INY          ;ESTAB ADDR OF
ADEF 98          TYA          ;FORMAT AREA
ADF0 18          CLC
ADF1 65C0        ADC FLDPTR
ADF3 85B2        STA PRFORM
ADF5 A900        LDA #0
ADF7 65C1        ADC FLDPTR+1
ADF9 85B3        STA PRFORM+1
ADFB A000        LDY #0          ;ESTAB ADDR OF
ADFD B1C0        LDA (FLDPTR),Y ;TOP OF DATA
ADFF 0A          ASL A          ;BUFFER
AE00 6903        ADC #3
AE02 18          CLC
AE03 65B2        ADC PRFORM
AE05 85C2        STA BUFTOP
AE07 85C4        STA BUFEND
AE09 85CA        STA CURPTR
AE0B A900        LDA #0
AE0D 85CD        STA CHNFLG ;CLEARS CHANGE FLG
AE0F 85CF        STA EROFST ;CLEARS ERROR OFFSET (USED IN STOREDIT)
AE11 85D3        STA AVGFLG ;USED IN SUMMRY
AE13 65B3        ADC PRFORM+1
AE15 85C3        STA BUFTOP+1
AE17 85C5        STA BUFEND+1
AE19 85CB        STA CURPTR+1

*
AE1B A6C9        LDX RECCNT+1 ;THIS RTN MPYS
AE1D A4C8        LDY RECCNT    ;RECCNT BY
AE1F D003 ^AE24  :LBL1        BNE :LBL2    ;RECLNG AND ADDS
AE21 CA          DEX          ;IT TO BUFTOP TO
AE22 3011 ^AE35  :LBL2        BMI :LBL3    ;ESTAB BUFEND
AE24 18          CLC
AE25 A5C4        LDA BUFEND
AE27 65C6        ADC RECLNG
AE29 85C4        STA BUFEND
AE2B A5C5        LDA BUFEND+1
AE2D 65C7        ADC RECLNG+1
AE2F 85C5        STA BUFEND+1
AE31 88          DEY
AE32 4C1FAE      JMP :LBL1
AE35 60          :LBL3        RTS

*
AE36 A6BB        CONVERT LDX CONREG;THIS RTN CONVERTS
AE38 8A          TXA          ;2 BYTE BCD TO HEX.
AE39 29F0        AND #F0     ;SEE P. 166 IN
AE3B 4A          LSR A        ;6502 ML SUBROUTINES
AE3C 85BB        STA CONREG   ;FOR DETAILS.
AE3E 4A          LSR A
AE3F 4A          LSR A
AE40 18          CLC
AE41 65BB        ADC CONREG

```

```

AE43 85BB          STA CONREG
AE45 8A            TXA
AE46 290F          AND #$0F
AE48 18            CLC
AE49 65BB          ADC CONREG
AE4B 85BB          STA CONREG
AE4D A6BC          LDX CONREG+1
AE4F A900          LDA #0
AE51 85BC          STA CONREG+1
AE53 CA            :LBL4 DEX
AE54 3010 ^AE66    BMI :LBL5
AE56 18            CLC
AE57 A5BB          LDA CONREG
AE59 6964          ADC #100
AE5B 85BB          STA CONREG
AE5D A5BC          LDA CONREG+1
AE5F 6900          ADC #0
AE61 85BC          STA CONREG+1
AE63 4C53AE        JMP :LBL4
AE66 60            :LBL5 RTS
*
*
*

AE67              PROC
AE67              RETREV
AE67 A900          LDA #0
AE69 85CC          STA BROWSE
AE6B 85CE          STA LODFLG ;DISABLES DEL, CHG
AE6D 85D2          STA SUMFLG
AE6F A9FF          :RET1 LDA #255
AE71 8DFC02        STA 764
AE74 A201          :RET15 LDX #1
AE76 207FA6        JSR MESSAGES
AE79 20D0BF        JSR COLRON
AE7C A900          :RET2 LDA #0 ;KEEP INVFLG OFF
AE7E 8DB602        STA 694
AE81 A940          LDA #$40
AE83 8DBE02        STA 702;- SHIFT LOCK
AE86 ADFC02        LDA 764
AE89 20E1BF        JSR CLRKEY;CLRS LOGO, CAPSLOK
AE8C C9FF          CMP #255
AE8E D011 ^AEA1    BNE :SELCT
AE90 AD1FD0        LDA 53279
AE93 C903          CMP #3 — START (C)
AE95 D0E5 ^AE7C    ~BNE :RET2
AE97 206CAD        JSR KEYDLAY
AE9A 203EA5        JSR SCREEN
AE9D 207EAD        JSR LSTLIN
AEA0 60            RTS
AEA1              :SELCT
AEA1 A5C8          LDA RECCNT

```

```

AEA3 D00C ^AEB1      BNE :SEL1
AEA5 A5C9            LDA RECCNT+1
AEA7 D008 ^AEB1      BNE :SEL1
AEA9 A205            LDX #5 — EMPTY FILE
AEAB 207FA6          JSR MESSAGES
AEAE 4C6FAE          JMP :RET1
AEB1 207EAD          :SEL1 JSR LSTLIN
AEB4 2029B9          JSR GET1
AEB7 C950            CMP #80      ; MUST REFRESH
AEB9 D003 ^AEBE      BNE :SEL15   ; SCREEN IF SUM
AEBB 4CD3AF          JMP :PRNT
AEBE 85BD            :SEL15 STA HOLDA ; JUST DONE UNLESS
AEC0 A5D2            LDA SUMFLG ; THIS SELECTION
AEC2 F007 ^AECB      BEQ :SEL16   ; IS PRINT (80)
AEC4 203EA5          JSR SCREEN
AEC7 A900            LDA #0
AEC9 85D2            STA SUMFLG
AECB A5BD            :SEL16 LDA HOLDA
AECD C946            CMP #70
AECF D003 ^AED4      BNE :SEL2   FORWARD
AED1 4C39AF          JMP :FWD
AED4 C94D            :SEL2 CMP #77 — SUM
AED6 D00A ^AEE2      BNE :SEL25
AED8 209EB7          JSR SUMMRY
AEDB A901            LDA #1
AEDD 85D2            STA SUMFLG
AEDF 4C6FAE          JMP :RET1
AEE2 C941            :SEL25 CMP #65 — A
AEE4 D012 ^AEF8      BNE :SEL26
AEE6 A901            LDA #1
AEE8 85D3            STA AVGFLG
AEEA 209EB7          JSR SUMMRY
AEED A900            LDA #0
AEEF 85D3            STA AVGFLG
AEF1 A901            LDA #1
AEF3 85D2            STA SUMFLG
AEF5 4C6FAE          JMP :RET1
AEF8 C942            :SEL26 CMP #66
AEFA D003 ^AEFF      BNE :SEL3   BACKWARD
AEFC 4C72AF          JMP :BKWD
AEFF C953            :SEL3 CMP #83
AF01 D003 ^AF06      BNE :SEL31   SEARCH
AF03 4C99AF          JMP :SRCH
AF06 C952            :SEL31 CMP #82
AF08 D009 ^AF13      BNE :SEL32   RESET
AF0A 20E4B2          JSR RESET
AF0D 207EAD          JSR LSTLIN
AF10 4C6FAE          JMP :RET1
AF13 A6CE            :SEL32 LDX LODFLG
AF15 D008 ^AF1F      BNE :SEL4
AF17 A20B            LDX #11

```

FORWARD
 SUM
 SEARCH
 RESET
 BACKWARD
 AVERAGE
 SUM
 RANGE
 COUNT
 RESET
 DOWN

RECORD MUST BE DISPLAYED

AF19	207FA6		JSR MESSAGES
AF1C	4C6FAE		JMP :RET1
AF1F	C943	:SEL4	CMP #67
AF21	D005 ^AF28		BNE :SEL5
AF23	A201		LDX #1
AF25	4CB6AF		JMP :CHNG
AF28	C950	:SEL5	CMP #80
AF2A	D003 ^AF2F		BNE :SEL6
AF2C	4CD3AF		JMP :PRNT
AF2F	C944	:SEL6	CMP #68
AF31	D003 ^AF36		BNE :SEL8
AF33	4CDCAF		JMP :DELT
AF36	4C6FAE	:SEL8	JMP :RET1
AF39	18	:FWD	CLC
AF3A	A5CC		LDA BROWSE
AF3C	F02A ^AF68		BEQ :FWD1
AF3E			ADD16 RECLNG, RECLNG+1, CURPTR, CURPTR+1
AF3E	+18		CLC
AF3F	+A5CA		LDA CURPTR
AF41	+65C6		ADC RECLNG
AF43	+85CA		STA CURPTR
AF45	+A5CB		LDA CURPTR+1
AF47	+65C7		ADC RECLNG+1
AF49	+85CB		STA CURPTR+1
AF4B	A000	:FWD01	LDY #0
AF4D	B1CA		LDA (CURPTR), Y
AF4F	C99B		CMP #EOL
AF51	D015 ^AF68		BNE :FWD1
AF53			SUB16 RECLNG, RECLNG+1, CURPTR, CURPTR+1
AF53	+38		SEC
AF54	+A5CA		LDA CURPTR
AF56	+E5C6		SBC RECLNG
AF58	+85CA		STA CURPTR
AF5A	+A5CB		LDA CURPTR+1
AF5C	+E5C7		SBC RECLNG+1
AF5E	+85CB		STA CURPTR+1
AF60	A203		LDX #3
AF62	207FA6		JSR MESSAGES
AF65	4C6FAE		JMP :RET1
AF68	20F4AF	:FWD1	JSR LOAD
AF6B	A901		LDA #1
AF6D	85CC		STA BROWSE
AF6F	4C6FAE		JMP :RET1
AF72	A5CA	:BKWD	LDA CURPTR
AF74	C5C2		CMP BUFTOP
AF76	D00E ^AF86		BNE :BKWD1
AF78	A5CB		LDA CURPTR+1
AF7A	C5C3		CMP BUFTOP+1
AF7C	D008 ^AF86		BNE :BKWD1
AF7E	A202		LDX #2
AF80	207FA6		JSR MESSAGES

change

Print

Delete

END OF FILE

- BEGIN OF FILE

```

AFB3 4C6FAE      JMP :RET1
AFB6 38          :BKWD1 SEC
AFB7 A5CA        LDA CURPTR
AFB9 E5C6        SBC RECLNG
AFBB 85CA        STA CURPTR
AFBD A5CB        LDA CURPTR+1
AFBF E5C7        SBC RECLNG+1
AF91 85CB        STA CURPTR+1
AF93 20F4AF      JSR LOAD
AF96 4C6FAE      JMP :RET1
AF99 20D6BF      :SRCH JSR COLROF      SEARCH
AF9C 203EA5      JSR SCREEN
AF9F A209        LDX #9      - ENTER SEARCH KEY TO Press (F1)
AFA1 207FA6      JSR MESSAGES
AFA4 A201        LDX #1
AFA6 2009A4      JSR ENTDAT
AFA9 207EAD      JSR LSTLIN      - SET POINTER TO READ FROM
AFAC A200        LDX #0      BOTTOM UP
AFAE 86BA        STX PRNTSW
AFB0 20CDB0      JSR SRCH1
AFB3 4C74AE      JMP :RET15
AFB6 20D6BF      :CHNG JSR COLROF
AFB9 A201        LDX #1
AFBB 2009A4      JSR ENTDAT
AFBE A5CA        LDA CURPTR
AFC0 8590        STA R9 ; (:BUFFLO IN STORDAT)
AFC2 A5CB        LDA CURPTR+1
AFC4 8591        STA R9+1
AFC6 A901        LDA #1
AFC8 85CD        STA CHNFLG
AFCA 2006AC      JSR CHNGDAT ; (IN STORDAT)
AFCD 98          TYA      ; Y IS FLAG INDICAT-
AFCE D0E6 ^AFB6  BNE :CHNG ; ING EDIT FAILURE
AFD0 4C6FAE      JMP :RET1
AFD3 20D6BF      :PRNT JSR COLROF
AFD6 20F4B2      JSR SCRNPTR
AFD9 4C6FAE      JMP :RET1
AFDC 20D6BF      :DELT JSR COLROF
AFDF A206        LDX #6      TYPE 'Y' TO DELETE RECORD
AFE1 207FA6      JSR MESSAGES
AFE4 2029B9      JSR GET1
AFE7 C959        CMP #89  (Y)
AFE9 D003 ^AFEE  BNE :DELXT
AFEB 204DB0      JSR CLOSUP
AFEE 207EAD      :DELXT JSR LSTLIN
AFF1 4C4BAF      JMP :FWD01

*
AFF4 LOAD
      = 0090      :BUFFLO = R9
      = 0091      :BUFFHI = R9+1
      = 0092      :SCRNLO = R10

```

```

      = 0093      :SCRNHI = R10+1
      = 0094      :BUFFPT = R11
      = 0095      :SCRNPT = R11+1
      = 0096      :CTRLO  = R12
      = 0097      :CTRHI  = R12+1
AFF4  A901      LDA #1
AFF6  85CE      STA LODFLG ;ENABLES DEL, CHG
AFF8  A5CA      LDA CURPTR
AFFA  8590      STA :BUFFLO
AFFC  A5CB      LDA CURPTR+1
AFFE  8591      STA :BUFFHI
B000  A559      LDA $59
B002  8593      STA :SCRNHI
B004  A558      LDA $58
B006  8592      STA :SCRNLO
B008  A050      LDY #80
B00A  8495      STY :SCRNPT
B00C  A000      LDY #0
B00E  8494      STY :BUFFPT
B010  A948      LDA #$48
B012  8596      STA :CTRLO
B014  A903      LDA #3
B016  8597      STA :CTRHI
B018  A495      :L100 LDY :SCRNPT
B01A  B192      LDA (:SCRNLO),Y
B01C  2980      AND #$80
B01E  F00E ^B02E BEQ :L200
B020  A494      LDY :BUFFPT
B022  B190      LDA (:BUFFLO),Y
B024  18        CLC
B025  6960      ADC #96
B027  A495      LDY :SCRNPT
B029  9192      STA (:SCRNLO),Y
B02B  2034B0     JSR :INBFPT
B02E  203BB0     :L200 JSR :INSCPT
B031  4C18B0     JMP :L100

      *
B034  E694      :INBFPT INC :BUFFPT
B036  D002 ^B03A BNE :INBFXT
B038  E691      INC :BUFFHI
B03A  60        :INBFXT RTS

      *
B03B  E695      :INSCPT INC :SCRNPT
B03D  D002 ^B041 BNE :DECCTR
B03F  E693      INC :SCRNHI
B041  C696      :DECCTR DEC :CTRLO
B043  D004 ^B049 BNE :INSCXT
B045  C697      DEC :CTRHI
B047  3001 ^B04A BMI :LOADXT
B049  60        :INSCXT RTS
B04A  68        :LOADXT PLA

```

```

B04B 68          PLA
B04C 60          RTS
                  EPROC
*
*
*
B04D          PROC
B04D A5CA      CLOSUP LDA CURPTR
B04F 8580      STA R1
B051 8582      STA R2
B053 A5CB      LDA CURPTR+1
B055 8581      STA R1+1
B057 8583      STA R2+1
B059          ADD16 RECLNG,RECLNG+1,R2,R2+1
B059 +18      CLC
B05A +A582     LDA R2
B05C +65C6     ADC RECLNG
B05E +8582     STA R2
B060 +A583     LDA R2+1
B062 +65C7     ADC RECLNG+1
B064 +8583     STA R2+1
B066 A000      :TOP  LDY #0
B068 B182      LDA (R2),Y
B06A 9180      STA (R1),Y
B06C C99B      CMP #EOL
B06E F01D ^B08D BEQ :ADJTOT
B070          :CONT ADD16 #1,#0,R1,R1+1
B070 +18      CLC
B071 +A580     LDA R1
B073 +6901     ADC #1
B075 +8580     STA R1
B077 +A581     LDA R1+1
B079 +6900     ADC #0
B07B +8581     STA R1+1
B07D          ADD16 #1,#0,R2,R2+1
B07D +18      CLC
B07E +A582     LDA R2
B080 +6901     ADC #1
B082 +8582     STA R2
B084 +A583     LDA R2+1
B086 +6900     ADC #0
B088 +8583     STA R2+1
B08A 4C66B0     JMP :TOP
B08D A5C0      :ADJTOT LDA FLDPTR ;THIS SECTION
B08F 8580      STA R1 ;FINDS TOTAL
B091 A5C1      LDA FLDPTR+1 ;RECORD COUNT
B093 8581      STA R1+1
B095 A000      LDY #0
B097 B180      LDA (R1),Y
B099 0A        ASL A
B09A 0A        ASL A

```

```

B09B A8      TAY
B09C C8      INY
B09D C8      INY
B09E C8      INY
B09F F8      SED      ; THIS SECTION
B0A0 38      SEC      ; SUBTRACTS ONE
B0A1 B180    LDA (R1),Y ; FROM BOTH TOTAL
B0A3 E901    SBC #1     ; RECORD COUNTS
B0A5 9180    STA (R1),Y
B0A7 C8      INY
B0A8 B180    LDA (R1),Y
B0AA E900    SBC #0
B0AC 9180    STA (R1),Y
B0AE D8      CLD
B0AF        SUB16 #1,#0,RECCNT,RECCNT+1
B0AF +38     SEC
B0B0 +A5C8   LDA RECCNT
B0B2 +E901   SBC #1
B0B4 +85C8   STA RECCNT
B0B6 +A5C9   LDA RECCNT+1
B0B8 +E900   SBC #0
B0BA +85C9   STA RECCNT+1
B0BC        SUB16 RECLNG,RECLNG+1,BUFEND,BUFEND+1
B0BC +38     SEC
B0BD +A5C4   LDA BUFEND
B0BF +E5C6   SBC RECLNG
B0C1 +85C4   STA BUFEND
B0C3 +A5C5   LDA BUFEND+1
B0C5 +E5C7   SBC RECLNG+1
B0C7 +85C5   STA BUFEND+1
B0C9 203EA5  JSR SCREEN
B0CC 60      RTS

```

*
*

```

B0CD        PROC
B0CD        SRCH1
          = 0080 : SCREN = R1
          = 0082 : YHOLD = R2
          = 0083 : CLPTR = R2+1
          = 0084 : FDCNT = R3
          = 0085 : VBFLG = R3+1
          = 0086 : KYLNG = R4
          = 0087 : FDLNG = R4+1
          = 0088 : OFSET = R5
          = 008A : STFLG = R6
          = 008B : RGFLG = R6+1
          = 008C : CHEKS = R7
          = 008E : TMCTR = R8
          = 0400 : TEMP  = $400

```

*
* FIND POS OF FLDS AND CALC OFFSET

```

*
B0CD  A000          LDY #0
B0CF  8488          STY :OFSET
B0D1  8489          STY :OFSET+1
B0D3  B1C0          LDA (%C0),Y; # OF FLDS
B0D5  8584          STA :FDCNT
B0D7  AA           TAX
B0D8  C8           :L10  INY
B0D9  C8           INY
B0DA  C8           INY
B0DB  C8           INY
B0DC  18           CLC
B0DD  B1C0          LDA (%C0),Y
B0DF  6588          ADC :OFSET
B0E1  8588          STA :OFSET
B0E3  A900          LDA #0
B0E5  6589          ADC :OFSET+1
B0E7  8589          STA :OFSET+1
B0E9  CA           DEX
B0EA  D0EC ^B0DB    BNE :L10

*
* TOP OF KEY FIND LOOP
*
B0EC  B1C0          :L11  LDA (%C0),Y
B0EE  8587          STA :FDLNG
B0F0          SUB16 :FDLNG,#0,:OFSET,:OFSET+1
B0F0  +38          SEC
B0F1  +A588         LDA :OFSET
B0F3  +E587         SBC :FDLNG
B0F5  +8588         STA :OFSET
B0F7  +A589         LDA :OFSET+1
B0F9  +E900         SBC #0
B0FB  +8589         STA :OFSET+1
B0FD  88           DEY

*
* CALC SCREEN LOCATION
*
B0FE  A558          LDA #58
B100  8580          STA :SCREEN
B102  A559          LDA #59
B104  8581          STA :SCREEN+1
B106  B1C0          LDA (%C0),Y
B108  AA           TAX
B109  CA           :L12  DEX
B10A  3010 ^B11C    BMI :L13
B10C  18           CLC
B10D  A580          LDA :SCREEN
B10F  6928          ADC #40
B111  8580          STA :SCREEN
B113  A581          LDA :SCREEN+1
B115  6900          ADC #0

```

```

B117 8581          STA :SCREEN+1
B119 4C09B1        JMP :L12
B11C 88            :L13  DEY
B11D 18            CLC
B11E B1C0          LDA (:C0),Y
B120 6580          ADC :SCREEN
B122 8580          STA :SCREEN
B124 A900          LDA #0
B126 6581          ADC :SCREEN+1
B128 8581          STA :SCREEN+1

```

```

*
* LOOK FOR KEY
*

```

```

B12A 8482          STY :YHOLD
B12C A0FF          LDY #FF
B12E C8            :L14  INY
B12F B180          LDA (:SCREEN),Y
B131 C980          CMP #80
B133 F0F9 ^B12E    BEQ :L14
B135 B00E ^B145    BCS :L15

```

```

*
* NO KEY IN FIELD
*

```

```

B137 A482          :NXFLD LDY :YHOLD
B139 88            DEY
B13A 88            DEY
B13B C684          DEC :FDCNT
B13D F003 ^B142    BEQ :L145
B13F 4CECB0        JMP :L11
B142 4C4BB2        :L145 JMP :ALDON.

```

```

*
* KEY FOUND - MOVE TO TEMP
*

```

```

B145 A200          :L15  LDX #0
B147 868A          STX :STFLG
B149 868B          STX :RGFLG
B14B 8685          STX :VBFLG
B14D 8686          :L16  STX :KYLNG
B14F B180          LDA (:SCREEN),Y
B151 C981          CMP #81
B153 9041 ^B196    BCC :L19
B155 38            SEC
B156 E960          SBC #60
B158 9D0004        STA :TEMP,X
B15B C95E          CMP #5E
B15D D018 ^B177    BNE :L164
B15F A900          LDA #0
B161 8588          STA :OFFSET
B163 8589          STA :OFFSET+1
B165 38            SEC
B166 A5C6          LDA RECLNG

```

shift space

SEARCH TOP TO BOTTOM

RAW !

on REVSPEC OR NORMAL CHAR SO DONE

Full Record Search

```

B168 E586          SBC :KYLNG
B16A 858C          STA :CHEKS
B16C A5C7          LDA RECLNG+1
B16E E900          SBC #0
B170 858D          STA :CHEKS+1
B172 E68C          INC :CHEKS
B174 4CB7B1        JMP :L20 qz
B177 C95C          :L164 CMP #$5C; BACK SLASH \ Sort
B179 D005 ^B180    BNE :L165
B17B 858A          STA :STFLG — BACK SLASH SORT
B17D 4C91B1        JMP :L18 156
B180 C99C          :L165 CMP #$9C; VERT BAR VERT BAR 1 Range Search Search in first position only
B182 D005 ^B189    BNE :L17
B184 8585          STA :VBFLG — VERTICAL BAR FLAG
B186 4C91B1        JMP :L18
B189 A58B          :L17 LDA :RGFLG
B18B 058A          ORA :STFLG
B18D 0585          ORA :VBFLG
B18F 858B          STA :RGFLG
B191 E8            :L18 INX
B192 C8            INY
B193 4C4DB1        JMP :L16
B196 A99B          :L19 LDA #EOL
B198 9D0004        STA :TEMP,X
B19B A900          LDA #0
B19D 858D          STA :CHEKS+1
B19F 38            SEC
B1A0 A587          LDA :FDLNG
B1A2 E586          SBC :KYLNG
B1A4 858C          STA :CHEKS
B1A6 E68C          INC :CHEKS — FULL ROWED SEARCH
B1A8 A585          LDA :VBFLG — VERTICAL BAR FLAG
B1AA D007 ^B1B3    BNE :L195
B1AC A58A          LDA :STFLG — BACK SLASH FLAG
B1AE F007 ^B1B7    BEQ :L20

*
B1B0 20ADB6        * JSR SORT — SORT FILE
*
B1B3 A901          :L195 LDA #1
B1B5 858C          STA :CHEKS
*
      = 0080        * :TMPTR = R1
*
B1B7 A5C2          :L20 LDA BUFTOP
B1B9 85CA          STA CURPTR
B1BB A5C3          LDA BUFTOP+1
B1BD 85CB          STA CURPTR+1
B1BF A000          :L21 LDY #0
B1C1 B1CA          LDA (CURPTR),Y
B1C3 C99B          CMP #EOL
B1C5 D003 ^B1CA    BNE :L22

```



```

*
*  ALL DATA SEARCHED
*
B1C7  4C37B1          JMP :NXFLD
*
B1CA  18              :L22  CLC
B1CB  A5CA            LDA CURPTR
B1CD  6588            ADC :OFSET
B1CF  8580            STA :TMPTR
B1D1  A5CB            LDA CURPTR+1
B1D3  6589            ADC :OFSET+1
B1D5  8581            STA :TMPTR+1
B1D7  A58C            LDA :CHEKS
B1D9  858E            STA :TMCTR
B1DB  A58D            LDA :CHEKS+1
B1DD  858F            STA :TMCTR+1
B1DF  A2FF            :L23  LDX #$FF
B1E1  A0FF            LDY #$FF
B1E3  E8              :L24  INX
B1E4  C8              INY
B1E5  BD0004          LDA :TEMP,X
B1E8  C99B            CMP #EOL
B1EA  F036 ^B222      BEQ :FOUND
B1EC  C95E            CMP #$5E; CARAT ^
B1EE  F032 ^B222      BEQ :FOUND
B1F0  C95C            CMP #$5C; BACK SLASH \
B1F2  F02E ^B222      BEQ :FOUND
B1F4  C99C            CMP #$9C; VERT BAR |
B1F6  F02A ^B222      BEQ :FOUND
B1F8  C93F            CMP #$3F; QUESTION MARK ?
B1FA  F0E7 ^B1E3      BEQ :L24
B1FC  D180            CMP (:TMPTR),Y
B1FE  F0E3 ^B1E3      BEQ :L24
B200  B007 ^B209      BCS :L25  NOT EQUAL BUT LESS LESS
B202  A58B            LDA :RGFLG
B204  F003 ^B209      BEQ :L25  - RANGE (BEG) + (END)
B206  4C28B2          JMP :RANGE
B209  C68E            :L25  DEC :TMCTR
B20B  D004 ^B211      BNE :L251
B20D  C68F            DEC :TMCTR+1
B20F  3009 ^B21A      BMI :NXREC  - done
B211  E680            :L251 INC :TMPTR
B213  D002 ^B217      BNE **+4
B215  E681            INC :TMPTR+1
B217  4CDFB1          JMP :L23
*
*  SET HIGH BIT IF NOT A FOUND RECORD
*
B21A  A000            :NXREC LDY #0
B21C  B1CA            LDA (CURPTR),Y
B21E  0980            ORA #$80

```

```
B220 91CA          STA (CURPTR),Y
B222 20D6B2      :FOUND JSR :ADLNG
B225 4CBFB1      JMP :L21
```

```
*
* COMPARES TO SECOND KEY IN RANGE
*
```

```
B228 E8          :RANGE INX
B229 BD0004      LDA :TEMP,X
B22C C95C        CMP #$5C
B22E F004 ^B234  BEQ :L259
B230 C99C        CMP #$9C
B232 D0F4 ^B228  BNE :RANGE
B234 A0FF        :L259 LDY #$FF
B236 C8          :L26 INY
B237 E8          INX
B238 BD0004      LDA :TEMP,X
B23B C99B        CMP #EOL
B23D F0E3 ^B222  BEQ :FOUND
B23F C93F        CMP #$3F; QUESTION MARK
B241 F0F3 ^B236  BEQ :L26
B243 D180        CMP (:TMPTR),Y
B245 F0EF ^B236  BEQ :L26
B247 B0D9 ^B222  BCS :FOUND
B249 90CF ^B21A  BCC :NXREC
```

```
*
* PRINT OR DISPLAY RECORDS
*
```

```
B24B A5C2        :ALDON LDA BUFTOP
B24D 85CA        STA CURPTR
B24F A5C3        LDA BUFTOP+1
B251 85CB        STA CURPTR+1
B253 A000        :L27 LDY #0
B255 B1CA        LDA (CURPTR),Y
B257 C99B        CMP #EOL
B259 F03D ^B298  BEQ :OUT
B25B B1CA        LDA (CURPTR),Y
B25D 1006 ^B265  BPL :HIT
B25F 20D6B2      :L28 JSR :ADLNG
B262 4C53B2      JMP :L27
B265 A5BA        :HIT LDA PRNTSW
B267 D03B ^B2A4  BNE :PRINT
```

```
*
B269 20F4AF      JSR LOAD
```

```
*
B26C A20A        LDX #10
B26E 207FA6      JSR MESSAGES
B271 A201        LDX #1
B273 207FA6      JSR MESSAGES
B276 20D0BF      JSR COLRON
B279 A9FF        LDA #255
B27B 8DFC02      STA 764
```

PRESS START TO CONTINUE SEARCH
(Bottom)

```

B27E  ADFC02      :L29  LDA 764
B281  C9FF        CMP #255
B283  D01B ^B2A0  BNE :OUT2
B285  AD1FD0      LDA 53279
B288  C906        CMP #6
B28A  D006 ^B292  BNE :L30
B28C  206CAD      JSR KEYDLAY
B28F  4C5FB2      JMP :L28
B292  C903      :L30  CMP #3
B294  D0E8 ^B27E  BNE :L29
B296  F005 ^B29D  BEQ :OUT1
B298  A203      :OUT  LDX #3
B29A  207FA6      JSR MESSAGES
B29D  20E4B2      :OUT1 JSR RESET
B2A0  20B1B2      :OUT2 JSR CLEAR
B2A3  60          RTS
*
B2A4  20D2B5      :PRINT JSR FPRINT
B2A7  AD1FD0      LDA 53279
B2AA  C903        CMP #3
B2AC  F0EA ^B298  BEQ :OUT
B2AE  4C5FB2      JMP :L28
*
* SUBROUTINES
*
B2B1  A5C2      CLEAR  LDA BUFTOP
B2B3  8583      STA :CLPTR
B2B5  A5C3      LDA BUFTOP+1
B2B7  8584      STA :CLPTR+1
B2B9  A000      LDY #0
B2BB  B183      :L31  LDA (:CLPTR),Y
B2BD  C99B      CMP #EOL
B2BF  F014 ^B2D5 BEQ :L32
B2C1  297F      AND #$7F
B2C3  9183      STA (:CLPTR),Y
B2C5          ADD16 RECLNG,RECLNG+1,:CLPTR,:CLPTR+1
B2C5  +18      CLC
B2C6  +A583     LDA :CLPTR
B2C8  +65C6     ADC RECLNG
B2CA  +8583     STA :CLPTR
B2CC  +A584     LDA :CLPTR+1
B2CE  +65C7     ADC RECLNG+1
B2D0  +8584     STA :CLPTR+1
B2D2  4CBBB2    JMP :L31
B2D5  60      :L32  RTS
*
*
B2D6          :ADLNG  ADD16 RECLNG,RECLNG+1,CURPTR,CURPTR+1
B2D6  +18      CLC
B2D7  +A5CA     LDA CURPTR
B2D9  +65C6     ADC RECLNG

```

(F1) = 60 AGAIN

(F7) = DONE

END OF FILE

```
B2DB +85CA      STA CURPTR
B2DD +A5CB      LDA CURPTR+1
B2DF +65C7      ADC RECLNG+1
B2E1 +85CB      STA CURPTR+1
B2E3 60         RTS
                EPROC
```

*

*

```
B2E4 A5C2      RESET  LDA BUFTOP
B2E6 85CA      STA CURPTR
B2E8 A5C3      LDA BUFTOP+1
B2EA 85CB      STA CURPTR+1
B2EC 203EA5    JSR SCREEN
B2EF A900      LDA #0
B2F1 85CC      STA BROWSE
B2F3 60         RTS
```

*

*

*

```
INCLUDE D:SUBRTNS3
PROC
```

```
B2F4
B2F4      SCRNPB
          = 0080      :SCRNLO = R1
          = 0081      :SCRNHI = R1+1
          = 0082      :ROWCTR = R2
          = 0083      :PRFLAG = R2+1
B2F4 18      CLC
B2F5 A558      LDA $58
B2F7 6950      ADC #80
B2F9 8580      STA :SCRNLO
B2FB A559      LDA $59
B2FD 6900      ADC #0
B2FF 8581      STA :SCRNHI
B301 A915      LDA #21
B303 8582      STA :ROWCTR
B305 20ECB8    JSR OPNPRNT
B308 A5B9      LDA OPNERR
B30A F001 ^B30D BEQ :TOP1
B30C 60         RTS
B30D C682      :TOP1 DEC :ROWCTR
B30F 3063 ^B374 BMI :OUT
B311 A000      LDY #0
B313 8483      STY :PRFLAG
B315 B180      :TOP2 LDA (:SCRNLO),Y
B317 C940      CMP #$40
B319 300F ^B32A BMI :OK
B31B C961      CMP #$61
B31D 3009 ^B328 BMI :NOTOK
B31F C9C0      CMP #$C0
B321 1005 ^B328 BPL :NOTOK
B323 297F      AND #$7F
```

```

B325 4C2AB3          JMP :OK
B328 A900           :NOTOK LDA #0
B32A 18             :OK   CLC
B32B 6920           ADC #32
B32D 998005         STA $580,Y
B330 C920           CMP #32
B332 F004 ^B338     BEQ :BOT
B334 A901           LDA #1
B336 8583           STA :PRFLAG
B338 C8             :BOT  INY
B339 C028           CPY #40
B33B D0D8 ^B315     BNE :TOP2
B33D A99B           LDA #EOL
B33F 998005         STA $580,Y
B342                ADD16 #40,#0,:SCRNLO,:SCRNHI
B342 +18            CLC
B343 +A580           LDA :SCRNLO
B345 +6928           ADC #40
B347 +8580           STA :SCRNLO
B349 +A581           LDA :SCRNHI
B34B +6900           ADC #0
B34D +8581           STA :SCRNHI
B34F A583           LDA :PRFLAG
B351 F0BA ^B30D     BEQ :TOP1
B353                PUTR #IOCB3,##580,##FF
B353 +A230           LDX #IOCB3
B355 +A909           LDA #PUTREC
B357 +9D4203         STA ICCOM,X
B35A +A980           LDA ##580##FF
B35C +9D4403         STA ICBAL,X
B35F +A905           LDA ##580/256
B361 +9D4503         STA ICBAL,X
B364 +A9FF           LDA ##FF##FF
B366 +9D4803         STA ICBLL,X
B369 +A9FF           LDA ##FF##FF
B36B +9D4903         STA ICBLL,X
B36E +2056E4         JSR CIOV
B371 4C0DB3         JMP :TOP1
B374 A99B           :OUT  LDA #155
B376 2044B9         JSR PUT3
B379                CLOSE #IOCB3
B379 +A230           LDX #IOCB3
B37B +A90C           LDA #CLOSE
B37D +9D4203         STA ICCOM,X
B380 +2056E4         JSR CIOV
B383 60             RTS

```

*

```

B384                PROC
B384                FORMAT
                :SCREEN = R1
                :FLDPTR = R2

```

1. FILL BUFFER
 3. SET FLAG IF NOT SPACE
 2. CORRECT CHARS TO NOT IN
 + DUMP GRAPHIC
 4. Print Line if Alog set

```

= 0083      :ADDER = R2+1
= 0084      :FLDCNT = R3
= 0085      :FULFLG = R3+1
= 0440      :BUFFER = $440

B384 A20E      LDX #14      ENTER PRINT CTRL CODES
B386 207FA6    JSR MESSAGES
B389 20C5A5    JSR INBLNK
B38C 203EA5    JSR SCREEN
B38F 206CAD    JSR KEYDLAY
B392 A000      LDY #0
B394 B1C0      LDA (FLDPTR),Y
B396 8584      STA :FLDCNT
B398 E684      INC :FLDCNT
B39A 8482      STY :FLDPTR
B39C C8        INY
B39D 8483      STY :ADDER
B39F 2044B4    JSR :POSTN
B3A2 A201      LDX #1
B3A4 A9FF      :L10 LDA #255
B3A6 8DFC02    STA 764
B3A9 ADFC02    :L11 LDA 764
B3AC C9FF      CMP #255
B3AE D046 ^B3F6 BNE :L20
B3B0 AD1FD0    LDA $D01F
B3B3 C906      CMP #6
B3B5 F00E ^B3C5 BEQ :START
B3B7 C903      CMP #3
B3B9 F024 ^B3DF BEQ :OPTION
B3BB C905      CMP #5
B3BD F031 ^B3F0 BEQ :SELECT
B3BF 20DEA5    JSR BLNKRT
B3C2 4CA9B3    JMP :L11
B3C5 86BE      :START STX HOLDX
B3C7 206CAD    JSR KEYDLAY
B3CA A6BE      LDX HOLDX
B3CC A980      LDA #$80
B3CE 9D4004    STA :BUFFER,X
B3D1 E8        INX
B3D2 20C2B4    JSR :LAST
B3D5 20BFB5    JSR :TFERO ;TRANSFER TO FORMAT BUFFER IN DATA AREA
B3D8 20D5A5    JSR QTBLNK
B3DB 203EA5    JSR SCREEN
B3DE 60        RTS
B3DF 206CAD    :OPTION JSR KEYDLAY
B3E2 20D5A5    JSR QTBLNK
B3E5 203EA5    JSR SCREEN
B3E8 207EAD    JSR LSTLIN
B3EB 68        PLA
B3EC 68        PLA
B3ED 4CB7A0    JMP OPTIONS
B3F0 20D5A5    :SELECT JSR QTBLNK

```

```

B3F3 4C84B3          JMP FORMAT
B3F6 A011           :L20  LDY #17
B3F8 88             :L21  DEY
B3F9 F0A9 ^B3A4     BEQ :L10
B3FB D933B4         CMP :LIST-1,Y
B3FE D0F8 ^B3F8     BNE :L21
B400 86BE           STX HOLDX
B402 2029B9         JSR GET1
B405 A6BE           LDX HOLDX
B407 C930           CMP #30; ASCII ZERO
B409 9015 ^B420     BCC :L30
B40B C99B           CMP #155; RETURN
B40D F011 ^B420     BEQ :L30
B40F 9D4004         STA :BUFFER,X
B412 A000           LDY #0
B414 18             CLC
B415 6960           ADC #96
B417 9180           STA (:SCREEN),Y
B419 E8             INX
B41A A582           LDA :FLDPTR
B41C 9D4004         STA :BUFFER,X
B41F E8             INX
B420 A0FF           :L30  LDY #-1
B422 C91C           CMP #28; CURSR UP
B424 F006 ^B42C     BEQ :L31
B426 C91E           CMP #30; CURSR BACK
B428 F002 ^B42C     BEQ :L31
B42A A001           LDY #1
B42C 8483           :L31  STY :ADDER
B42E 2044B4         JSR :POSTN
B431 4CA4B3         JMP :L10
*
B434 8E8F0C321F     :LIST DB 142,143,12,50,31,30,26,24,29,27,51,53,48,62,58,4;
*
B444 A900           :POSTN LDA #0
B446 8585           STA :FULFLG
B448 18             :L80  CLC
B449 A582           LDA :FLDPTR
B44B 6583           ADC :ADDER
B44D 8582           STA :FLDPTR
B44F A8             TAY
B450 C000           CPY #0
B452 D00A ^B45E     BNE :L81
B454 20B2B4         JSR :OUTRTN
B457 A584           LDA :FLDCNT
B459 8582           STA :FLDPTR
B45B 4C48B4         JMP :L80
B45E C484           :L81  CPY :FLDCNT; (PLUS ONE)
B460 D00A ^B46C     BNE :L815
B462 20B2B4         JSR :OUTRTN
B465 A900           LDA #0

```

```

B467 8582          STA :FLDPTR
B469 4C48B4       JMP :L80

*
* THIS SECTION FINDS THE ROW AND
* COL FROM FIELD DATA
*
B46C 88           :L815  DEY
B46D 98           TYA
B46E 0A           ASL A
B46F 0A           ASL A
B470 A8           TAY
B471 C8           INY
B472 C8           INY
B473 B1C0         LDA (FLDPTR),Y
B475 8555         STA $55; COL
B477 C8           INY
B478 B1C0         LDA (FLDPTR),Y
B47A 8554         STA $54; ROW

*
* THIS SECTION CALCULATES THE
* LOCATION IN SCREEN MEMORY
*
B47C A558         LDA $58
B47E 8580         STA :SCREEN
B480 A559         LDA $59
B482 8581         STA :SCREEN+1
B484 A454         LDY $54
B486 88           :L82  DEY
B487 3010 ^B499   BMI :L83
B489             ADD16 #40,#0,:SCREEN,:SCREEN+1
B489 +18          CLC
B48A +A580        LDA :SCREEN
B48C +6928        ADC #40
B48E +8580        STA :SCREEN
B490 +A581        LDA :SCREEN+1
B492 +6900        ADC #0
B494 +8581        STA :SCREEN+1
B496 4C86B4       JMP :L82
B499             :L83  ADD16 $55,#0,:SCREEN,:SCREEN+1
B499 +18          CLC
B49A +A580        LDA :SCREEN
B49C +6555        ADC $55
B49E +8580        STA :SCREEN
B4A0 +A581        LDA :SCREEN+1
B4A2 +6900        ADC #0
B4A4 +8581        STA :SCREEN+1
B4A6 A000        LDY #0

*
* THIS SECTION CHECKS TO SEE IF
* FIELD ALREADY MARKED
*

```



```

B4A8 B180 LDA (:SCREEN),Y
B4AA C980 CMP #$80
B4AC F003 ^B4B1 BEQ :L84
B4AE 4C48B4 JMP :L80
B4B1 60 :L84 RTS
*
B4B2 A585 :OUTRTN LDA :FULFLG
B4B4 F007 ^B4BD BEQ :L90
B4B6 68 PLA
B4B7 68 PLA
B4B8 68 PLA
B4B9 68 PLA
B4BA 4CC5B3 JMP :START
B4BD A901 :L90 LDA #1
B4BF 8585 STA :FULFLG
B4C1 60 RTS
*
*
*
*
B4C2 A558 :LAST LDA $58
B4C4 8580 STA :SCREEN
B4C6 A559 LDA $59
B4C8 18 CLC
B4C9 6903 ADC #3
B4CB 8581 STA :SCREEN+1
B4CD 86BE STX HOLDX
B4CF A20F LDX #15 - LINES BETWEEN RECORDS
B4D1 207FA6 JSR MESSAGES
B4D4 A6BE LDX HOLDX
B4D6 A917 LDA #23
B4D8 8554 STA $54
B4DA A922 LDA #34
B4DC 8555 STA $55
B4DE A0BA LDY #186
B4E0 20F7B4 JSR :GETDATA
B4E3 20C5A5 JSR INBLNK
B4E6 A210 LDX #16 - LEFT MARGIN
B4E8 207FA6 JSR MESSAGES
B4EB A90F LDA #15
B4ED 8555 STA $55
B4EF A0A7 LDY #167
B4F1 A200 LDX #0
B4F3 20F7B4 JSR :GETDATA
B4F6 60 RTS
*
B4F7 :GETDATA
B4F7 86BE STX HOLDX
B4F9 84BF :G09 STY HOLDY
B4FB A9FF LDA #255
B4FD 8DFC02 STA 764

```

```

B500  ADFC02      :G10    LDA 764
B503  C9FF        CMP #255
B505  D01A ^B521  BNE :G20
B507  AD1FD0      LDA #D01F
B50A  C906        CMP #6
B50C  D006 ^B514  BNE :G11
B50E  206CAD      JSR KEYDLAY
B511  4C7EB5      JMP :G70
B514  C903        :G11    CMP #3
B516  D003 ^B51B  BNE :G12
B518  4CDFB3      JMP :OPTIONS
B51B  20DEA5      :G12    JSR BLNKRT
B51E  4C00B5      JMP :G10
      *
B521  C986        :G20    CMP #134
B523  F018 ^B53D  BEQ :G30
      * CHANGE BS TO CURS BACK
B525  C934        CMP #52
B527  D007 ^B530  BNE :G21
B529  A986        LDA #134
B52B  8DFC02      STA 764
B52E  D00D ^B53D  BNE :G30
      *
B530  C987        :G21    CMP #135
B532  F009 ^B53D  BEQ :G30
B534  C980        CMP #128
B536  3005 ^B53D  BMI :G30
B538  A4BF        LDY HOLDY
B53A  4CF9B4      :G25    JMP :G09
B53D  20D5A5      :G30    JSR QTBLNK
B540  2029B9      JSR GET1
B543  A4BF        LDY HOLDY
B545  C99B        CMP #155
B547  D003 ^B54C  BNE :G32
B549  4C7EB5      :G31    JMP :G70
B54C  C91F        :G32    CMP #31
B54E  D00B ^B55B  BNE :G34
B550  C8          :G33    INY
B551  E655        INC #55
B553  B180        LDA (:SCREEN),Y
B555  2980        AND #80
B557  F006 ^B55F  BEQ :G35
B559  D0DF ^B53A  BNE :G25
B55B  C91E        :G34    CMP #30
B55D  D00B ^B56A  BNE :G40
B55F  88          :G35    DEY
B560  C655        DEC #55
B562  B180        LDA (:SCREEN),Y
B564  2980        AND #80
B566  F0E8 ^B550  BEQ :G33
B568  D0D0 ^B53A  BNE :G25

```

```

B56A C920      :G40    CMP #20
B56C F008 ^B576    BEQ :G50
B56E C930      CMP #30
B570 30C8 ^B53A    BMI :G25
B572 C93A      CMP #3A
B574 10C4 ^B53A    BPL :G25
B576 18        :G50    CLC
B577 6960      ADC #96
B579 9180      STA (:SCREEN),Y
B57B 4C50B5     JMP :G33
B57E 20D5A5     :G70    JSR QTBLNK
B581 A097      LDY #151
B583 C8        :G71    INY
B584 B180      LDA (:SCREEN),Y
B586 2980      AND #80
B588 F0F9 ^B583    BEQ :G71
B58A C8        INY
B58B B180      LDA (:SCREEN),Y
B58D C980      CMP #80 ;THIS IS FOR SINGLE
B58F D008 ^B599    BNE :G72 ;DIGIT ENTRIES
B591 88        DEY
B592 B180      LDA (:SCREEN),Y
B594 290F      AND #0F
B596 4CAAB5     JMP :G80
B599 290F      :G72    AND #0F
B59B A6BE      LDX HOLDX
B59D 9D4004     STA :BUFFER,X
B5A0 88        DEY
B5A1 B180      LDA (:SCREEN),Y
B5A3 0A        ASL A
B5A4 0A        ASL A
B5A5 0A        ASL A
B5A6 0A        ASL A
B5A7 1D4004     ORA :BUFFER,X
B5AA 84BF      :G80    STY HOLDY
B5AC 85BB      STA CONREG
B5AE A900      LDA #0
B5B0 85BC      STA CONREG+1
B5B2 2036AE     JSR CONVERT
B5B5 A4BF      LDY HOLDY
B5B7 A5BB      LDA CONREG
B5B9 A6BE      LDX HOLDX
B5BB 9D4004     STA :BUFFER,X
B5BE 60        RTS

*
*
B5BF A0FF      :TFERO  LDY #FF
B5C1 C8        :TFER1  INY
B5C2 B94004     LDA :BUFFER,Y
B5C5 91B2      STA (PRFORM),Y
B5C7 C980      CMP #80

```

```

B5C9 D0F6 ^B5C1      BNE :TFER1
B5CB C8              INY
B5CC B94004          LDA :BUFFER,Y
B5CF 91B2            STA (PRFORM),Y
B5D1 60              RTS

*
*
*

B5D2                PROC
B5D2                FPRINT
                    = 0440      :BUFFER = $440
                    = 009A      :CODE   = R14
                    = 009B      :FIELD  = R14+1
                    = 009C      :COUNT = R15
                    = 009D      :HOLD   = R15+1
                    = 009E      :DATA   = R16
                    = 008A      :MARGN  = R6

B5D2 209AB6          JSR :TFER1 ;TRANSFER FROM FORMAT AREA OF DATA
B5D5 A200            LDX #0
B5D7 869D            STX :HOLD
B5D9 BD4004          LDA :BUFFER,X
B5DC 858A            STA :MARGN
B5DE E8              INX
B5DF A5B4            :L05     LDA MRGNSW
B5E1 D00B ^B5EE      BNE :L10
B5E3 A48A            LDY :MARGN - SEND MARGIN SPACES
B5E5 A920            LDA #32
B5E7 2088B6          JSR :L50
B5EA A901            LDA #1
B5EC 85B4            STA MRGNSW
B5EE BD4004          :L10     LDA :BUFFER,X
B5F1 C980            CMP #80
B5F3 D011 ^B606      BNE :L11
B5F5 E8              INX
B5F6 BD4004          LDA :BUFFER,X
B5F9 F00A ^B605      BEQ :L105 ;SKIP IF 0 LINES BETWEEN RECORDS
B5FB A8              TAY
B5FC A99B            LDA #EOL SEND Y (CR)
B5FE 2088B6          JSR :L50
B601 A900            LDA #0
B603 85B4            STA MRGNSW -DO MARGIN AGAIN
B605 60              :L105   RTS
B606 859A            :L110   STA :CODE
B608 A5CA            LDA CURPTR
B60A 859E            STA :DATA
B60C A5CB            LDA CURPTR+1
B60E 859F            STA :DATA+1
B610 E8              INX
B611 BD4004          LDA :BUFFER,X
B614 E8              INX
B615 859B            STA :FIELD

```

```

B617 A000          LDY #0
B619 C69B          :L20 DEC :FIELD
B61B F014 ^B631    BEQ :L25
B61D C8           INY ! INY ! INY ! INY
B61E +C8          INY ! INY ! INY
B61F +C8          INY ! INY
B620 +C8          INY
B621 18           CLC
B622 B1C0          LDA (FLDPTR),Y
B624 659E          ADC :DATA
B626 859E          STA :DATA
B628 A900          LDA #0
B62A 659F          ADC :DATA+1
B62C 859F          STA :DATA+1
B62E 4C19B6        JMP :L20
B631 C8           :L25 INY ! INY ! INY ! INY
B632 +C8          INY ! INY ! INY
B633 +C8          INY ! INY
B634 +C8          INY
B635 B1C0          LDA (FLDPTR),Y
B637 859C          STA :COUNT
B639 A000          LDY #0
B63B AD1FD0        :L30 LDA 53279 ;RETURN IF OPTION KEY PRESSED
B63E C903          CMP #3
B640 D001 ^B643    BNE :L31
B642 60           RTS
B643 B19E          :L31 LDA (:DATA),Y
B645 84BF          STY HOLDY
B647 86BE          STX HOLDX
B649 2044B9        JSR PUT3
B64C A4BF          LDY HOLDY
B64E A6BE          LDX HOLDX
B650 C8           INY
B651 C69C          DEC :COUNT
B653 D0E6 ^B63B    BNE :L30
*
B655 A59A          :L40 LDA :CODE
B657 C941          CMP #65
B659 301E ^B679    BMI :L45
B65B C953          CMP #83 ;SINGLE SPACE
B65D D002 ^B661    BNE :L41
B65F A001          LDY #1
B661 C944          :L41 CMP #68 ;DOUBLE SPACE
B663 D002 ^B667    BNE :L42
B665 A002          LDY #2
B667 C954          :L42 CMP #84 ;TRIPLE SPACE
B669 D002 ^B66D    BNE :L43
B66B A003          LDY #3
B66D A99B          :L43 LDA #EOL
B66F 2088B6        JSR :L50
B672 A900          LDA #0

```

```

B674 85B4          STA MRGNSW
B676 4CDFB5       JMP :L05
B679 290F         :L45 AND #$0F
B67B A8           TAY
B67C A920         LDA #32
B67E 2088B6       JSR :L50
B681 A901         LDA #1
B683 85B4          STA MRGNSW
B685 4CDFB5       JMP :L05

```

```

*
B688 88           :L50 DEY
B689 300E ^B699   BMI :L55
B68B 84BF         STY HOLDY
B68D 86BE         STX HOLDX
B68F 2044B9       JSR PUT3
B692 A4BF         LDY HOLDY
B694 A6BE         LDX HOLDX
B696 4C88B6       JMP :L50
B699 60           :L55 RTS

```

```

*
*
B69A A0FF         :TFER1 LDY #$FF
B69C C8           :TFER1 INY
B69D B1B2         LDA (PRFORM),Y
B69F 994004       STA :BUFFER,Y
B6A2 C980         CMP #$80
B6A4 D0F6 ^B69C   BNE :TFER1
B6A6 C8           INY
B6A7 B1B2         LDA (PRFORM),Y
B6A9 994004       STA :BUFFER,Y
B6AC 60           RTS
EPROC

```

```

*
*
INCLUDE D:SUBRTNS4
PROC

```

```

B6AD
B6AD SORT
= 00E0 SRTPT1 = $E0
= 00E2 SRTPT2 = $E2
= 00E4 SRTPT3 = $E4
= 00E6 T1      = $E6
= 00E8 T2      = $E8
= 00EA T3      = $EA
= 00EC XCNGSW  = $EC
= 00ED THOLD   = $ED
= 0088 SRTOFF  = R5 -OFFSET
= 0087 SRTLNG  = R4+1

```

```

B6AD A21E         LDX #30
B6AF 2085A6       JSR MSGS1
B6B2 A901         LDA #1
B6B4 85EC         STA XCNGSW

```

SORT

~SORTING~

```

B6B6 A5C4          LDA BUFEND      SET POINTER TO END
B6B8 85E4          STA SRTPT3
B6BA A5C5          LDA BUFEND+1
B6BC 85E5          STA SRTPT3+1
B6BE A5EC          :L10 LDA XCNGSW  NO SWAPS - ALL DONE
B6C0 F021 ^B6E3    BEQ :EXIT
B6C2 A900          LDA #0          CLEAR SWAP SWITCH
B6C4 85EC          STA XCNGSW
B6C6 18            CLC
B6C7 A5C2          LDA BUFTOP
B6C9 6588          ADC SRTOFF      POSITION OFFSET FOR
B6CB 85E0          STA SRTPT1      FIELD TO SORT ON
B6CD A5C3          LDA BUFTOP+1
B6CF 6589          ADC SRTOFF+1
B6D1 85E1          STA SRTPT1+1
B6D3 A5E1          LDA SRTPT1+1
B6D5 C5E5          CMP SRTPT3+1    TEST FOR END OF FILE
B6D7 F004 ^B6DD    BEQ :L11
B6D9 900C ^B6E7    BCC :L15
B6DB B006 ^B6E3    BCS :EXIT
B6DD A5E0          :L11 LDA SRTPT1
B6DF C5E4          CMP SRTPT3
B6E1 9004 ^B6E7    BCC :L15
B6E3 207EAD        :EXIT JSR LSTLIN END - CLEAR MESSAGE
B6E6 60            RTS
B6E7 18            :L15 CLC
B6E8 A5E0          LDA SRTPT1
B6EA 65C6          ADC RECLNG
B6EC 85E2          STA SRTPT2
B6EE A5E1          LDA SRTPT1+1
B6F0 65C7          ADC RECLNG+1
B6F2 85E3          STA SRTPT2+1
B6F4 A0FF          :L20 LDY #$FF
B6F6 A687          LDX SRTLNG
B6F8 C8            :L21 INY
B6F9 CA            DEX
B6FA 3013 ^B70F    BMI :NEXT
B6FC B1E2          LDA (SRTPT2),Y
B6FE 297F          AND #$7F
B700 85ED          STA THOLD
B702 B1E0          LDA (SRTPT1),Y
B704 297F          AND #$7F
B706 C5ED          CMP THOLD
B708 F0EE ^B6F8    BEQ :L21
B70A 9003 ^B70F    BCC :NEXT
B70C 2049B7        JSR :XCHNG      SWAP RECORDS
B70F               :NEXT
B70F               ADD16 RECLNG,RECLNG+1,SRTPT1,SRTPT1+1
B70F +18           CLC
B710 +A5E0         LDA SRTPT1
B712 +65C6         ADC RECLNG

```

```

B714 +85E0      STA SRTPT1
B716 +A5E1      LDA SRTPT1+1
B718 +65C7      ADC RECLNG+1
B71A +85E1      STA SRTPT1+1
B71C            ADD16 RECLNG,RECLNG+1,SRTPT2,SRTPT2+1
B71C +18        CLC
B71D +A5E2      LDA SRTPT2
B71F +65C6      ADC RECLNG
B721 +85E2      STA SRTPT2
B723 +A5E3      LDA SRTPT2+1
B725 +65C7      ADC RECLNG+1
B727 +85E3      STA SRTPT2+1
B729 A5E3       LDA SRTPT2+1
B72B C5E5       CMP SRTPT3+1
B72D F004 ^B733 BEQ :NXT1
B72F 90C3 ^B6F4 BCC :L20
B731 B006 ^B739 BCS :DONE
B733 A5E2       :NXT1 LDA SRTPT2
B735 C5E4       CMP SRTPT3
B737 90BB ^B6F4 BCC :L20
B739           :DONE
B739           SUB16 RECLNG,RECLNG+1,SRTPT3,SRTPT3+1
B739 +38        SEC
B73A +A5E4      LDA SRTPT3
B73C +E5C6      SBC RECLNG
B73E +85E4      STA SRTPT3
B740 +A5E5      LDA SRTPT3+1
B742 +E5C7      SBC RECLNG+1
B744 +85E5      STA SRTPT3+1
B746 4CBEB6     JMP :L10

```

```

*
: XCHNG LDA #1
B749 A901      STA XCNGSW
B74B 85EC      SEC
B74D 38        LDA SRTPT1
B74E A5E0      SBC SRTPT1
B750 E588      STA T1
B752 85E6      LDA SRTPT1+1
B754 A5E1      SBC SRTPT1+1
B756 E589      STA T1+1
B758 85E7      SEC
B75A 38        LDA SRTPT2
B75B A5E2      SBC SRTPT2
B75D E588      STA T2
B75F 85E8      LDA SRTPT2+1
B761 A5E3      SBC SRTPT2+1
B763 E589      STA T2+1
B765 85E9      LDA RECLNG
B767 A5C6      STA T3
B769 85EA      LDA RECLNG+1
B76B A5C7      STA T3+1
B76D 85EB

```

set switch

*CORRECT POINTERS
(SUB OFFSET)*

#1

#2


```

B76F  A000          LDY #0
B771  B1E6          :X10 LDA (T1),Y
B773  AA            TAX
B774  B1E8          LDA (T2),Y
B776  91E6          STA (T1),Y
B778  8A            TXA
B779  91E8          STA (T2),Y
B77B          ADD16 #1,#0,T1,T1+1
B77B  +18           CLC
B77C  +A5E6         LDA T1
B77E  +6901         ADC #1
B780  +85E6         STA T1
B782  +A5E7         LDA T1+1
B784  +6900         ADC #0
B786  +85E7         STA T1+1
B788          ADD16 #1,#0,T2,T2+1
B788  +18           CLC
B789  +A5E8         LDA T2
B78B  +6901         ADC #1
B78D  +85E8         STA T2
B78F  +A5E9         LDA T2+1
B791  +6900         ADC #0
B793  +85E9         STA T2+1
B795  C6EA         DEC T3
B797  D0D8 ^B771    BNE :X10
B799  C6EB         DEC T3+1
B79B  10D4 ^B771    BPL :X10
B79D  60           RTS

*
*
B79E          PROC
B79E          SUMMRY
          = 0080      :OFFSET = R1
          = 0082      :FLDLN  = R2
          = 0084      :DECPT   = R3
          = 0055      :COL     = $55
          = 0054      :ROW     = $54
B79E  203EA5        JSR SCREEN
B7A1  A901          LDA #1
B7A3  8DF002        STA 752 ;TURN OFF CURSOR
B7A6  A000          LDY #0
B7A8  8480          STY :OFFSET
B7AA  8481          STY :OFFSET+1
B7AC  B1C0          LDA (FLDPTR),Y
B7AE  AA            TAX
B7AF  C8            INY
B7B0  CA            DEX
B7B1  1006 ^B7B9    BPL :L11
B7B3  A900          LDA #0
B7B5  8DF002        STA 752 ;TURN CURSOR BACK ON
B7B8  60           RTS ;RETURN
          ↗:L10 -
          ↘

```

```

B7B9 B1C0      :L11 LDA (FLDPTR),Y
B7BB C9AE      CMP #$AE - N
B7BD D00B ^B7CA BNE :L12
B7BF 84BF      STY HOLDY
B7C1 86BE      STX HOLDX
B7C3 20DDB7    JSR :SUMIT
B7C6 A4BF      LDY HOLDY
B7C8 A6BE      LDX HOLDX
B7CA C8        :L12 INY ! INY ! INY
B7CB +C8      INY ! INY +6
B7CC +C8      INY
B7CD B1C0      LDA (FLDPTR),Y
B7CF 18        CLC
B7D0 6580      ADC :OFSET
B7D2 8580      STA :OFSET
B7D4 A900      LDA #0
B7D6 6581      ADC :OFSET+1
B7D8 8581      STA :OFSET+1
B7DA 4CAF87    JMP :L10

*
*
B7DD C8        :SUMIT INY
B7DE B1C0      LDA (FLDPTR),Y
B7E0 8555      STA :COL
B7E2 C8        INY
B7E3 B1C0      LDA (FLDPTR),Y
B7E5 8554      STA :ROW

*
B7E7 A5C2      LDA BUFTOP
B7E9 18        CLC
B7EA 6580      ADC :OFSET
B7EC 85F3      STA INBUFF
B7EE A5C3      LDA BUFTOP+1
B7F0 6581      ADC :OFSET+1
B7F2 85F4      STA INBUFF+1
B7F4 C8        INY
B7F5 B1C0      LDA (FLDPTR),Y
B7F7 8582      STA :FLDLN
B7F9 2044DA    JSR ZFR0
B7FC 20B6DD    :L20 JSR FMOVE
B7FF A482      LDY :FLDLN
B801 B1F3      LDA (INBUFF),Y
B803 85BD      STA HOLDA
B805 A99B      LDA #EOL
B807 91F3      STA (INBUFF),Y
B809 A900      LDA #0
B80B 85F2      STA CIX
B80D 2044DA    JSR ZFR0
B810 2000D8    JSR AFP
B813 2066DA    JSR FADD
B816 A482      LDY :FLDLN

```

```

B818 A5BD          LDA HOLDA
B81A 91F3          STA (INBUFF),Y
      *
B81C 18           CLC
B81D A5F3          LDA INBUFF
B81F 65C6          ADC RECLNG
B821 85F3          STA INBUFF
B823 A5F4          LDA INBUFF+1
B825 65C7          ADC RECLNG+1
B827 85F4          STA INBUFF+1
      *
B829 A5F4          LDA INBUFF+1
B82B C5C5          CMP BUFEND+1
B82D 90CD ^B7FC    BCC :L20
B82F F002 ^B833    BEQ :L25
B831 B006 ^B839    BCS :L26
B833 A5F3          :L25 LDA INBUFF
B835 C5C4          CMP BUFEND
B837 90C3 ^B7FC    BCC :L20
      *
B839 A5D3          :L26 LDA AVGFLG
B83B F052 ^B88F    BEQ :L29
B83D A940          LDA #$40
B83F 85FC          STA FLPTR
B841 A904          LDA #4
B843 85FD          STA FLPTR+1
B845 20ABDD        JSR $DDAB ;FSTOP
B848 A5C8          LDA RECCNT
B84A 85D4          STA FR0
B84C A5C9          LDA RECCNT+1
B84E 85D5          STA FR0+1
B850 20AAD9        JSR IFP
B853 20B6DD        JSR FMOVE
B856 208DDD        JSR $DD8D ;FLDOP
B859 2028DB        JSR FDIY
B85C 20E6D8        JSR FASC
B85F A900          LDA #0
B861 8584          STA :DECPT
B863 A0FF          LDY #$FF
B865 C8            :L27 INY
B866 B1F3          LDA (INBUFF),Y
B868 C945          CMP #$45 ;E
B86A F026 ^B892    BEQ :L30
B86C C92E          CMP #$2E ;DEC POINT
B86E D002 ^B872    BNE :L28
B870 E684          INC :DECPT
B872 2980          :L28 AND #$80
B874 F0EF ^B865    BEQ :L27
B876 A584          LDA :DECPT
B878 F018 ^B892    BEQ :L30
B87A 20B6DD        JSR FMOVE

```

```

B87D A9E7 LDA #ROUNDR&255
B87F 85F3 STA INBUFF
B881 A9B8 LDA #ROUNDR/256
B883 85F4 STA INBUFF+1
B885 A900 LDA #0
B887 85F2 STA CIX
B889 2000D8 JSR AFP
B88C 2066DA JSR FADD
B88F 20E6D8 :L29 JSR FASC
B892 A979 :L30 LDA #$79
B894 8584 STA :DECPT
B896 A0FF LDY #$FF
B898 C8 :L31 INY
B899 B1F3 LDA (INBUFF),Y
B89B 2980 AND #$80
B89D D015 ^B8B4 BNE :L32
B89F B1F3 LDA (INBUFF),Y
B8A1 C92E CMP #$2E ;DECIMAL POINT
B8A3 D008 ^B8AD BNE :L315
B8A5 8484 STY :DECPT
B8A7 E684 INC :DECPT
B8A9 E684 INC :DECPT
B8AB E684 INC :DECPT
B8AD 0980 :L315 ORA #$80
B8AF 91F3 STA (INBUFF),Y
B8B1 4C98B8 JMP :L31
B8B4 84BD :L32 STY HOLDA ;HOLDY IS BUSY!
B8B6 2095AD JSR CHRRL ;ASSURES CHR REPLACED BY CRSR MOVE IS CO
B8B9 A4BD LDY HOLDA
B8BB C8 INY
B8BC A99B LDA #EOL
B8BE 91F3 STA (INBUFF),Y
B8C0 A5D3 LDA AV6FLG
B8C2 F006 ^B8CA BEQ :L33
B8C4 A484 LDY :DECPT
B8C6 A99B LDA #EOL
B8C8 91F3 STA (INBUFF),Y
B8CA A220 :L33 LDX #IOCB2
B8CC A909 LDA #PUTREC
B8CE 9D4203 STA ICCOM,X
B8D1 A5F3 LDA INBUFF
B8D3 9D4403 STA ICBAL,X
B8D6 A5F4 LDA INBUFF+1
B8D8 9D4503 STA ICBAL,X
B8DB A9FF LDA #$FF
B8DD 9D4803 STA ICBLL,X
B8E0 9D4903 STA ICBLL,X
B8E3 2056E4 JSR CIOV
B8E6 60 RTS
EPROC
B8E7 2E3030359B ROUNDR DB '.005',EOL

```

```

*
*
B8EC          PROC
B8EC          OPNPRNT
B8EC    A900      LDA #0
B8EE    85B9      STA OPNERR
B8F0          OPEN #IOCB3,#OWRIT,#0,#PRINTR
B8F0    +A230     LDX #IOCB3
B8F2    +A903     LDA #OPEN
B8F4    +9D4203   STA ICCOM,X
B8F7    +A9F7     LDA #PRINTR&#FF
B8F9    +9D4403   STA ICBAL,X
B8FC    +A9BF     LDA #PRINTR/256
B8FE    +9D4503   STA ICBAL,X
B901    +A908     LDA #OWRIT
B903    +9D4A03   STA ICAX1,X
B906    +A900     LDA #0
B908    +9D4B03   STA ICAX2,X
B90B    +2056E4   JSR CIOV
B90E    A230      LDX #IOCB3
B910    BD4303    LDA ICSTA,X
B913    2980      AND #80
B915    F011 ^B928 BEQ :OUT
B917    85B9      STA OPNERR
B919          CLOSE #IOCB3
B919    +A230     LDX #IOCB3
B91B    +A90C     LDA #CLOSE
B91D    +9D4203   STA ICCOM,X
B920    +2056E4   JSR CIOV
B923    A214      LDX #20
B925    207FA6    JSR MESSAGES
B928    60        :OUT RTS

```

check Printer

```

*
*
B929          PROC
B929    A210      GET1 LDX #IOCB1
B92B    D002 ^B92F BNE :GET
B92D    A220      GET2 LDX #IOCB2
B92F    A907      :GET LDA #GETCHR
B931    9D4203    STA ICCOM,X
B934    A900      LDA #0
B936    9D4803    STA ICBLL,X
B939    9D4903    STA ICBLH,X
B93C    2056E4    JSR CIOV
B93F    60        RTS
*
B940    A220      PUT2 LDX #IOCB2
B942    D002 ^B946 BNE :PUT
B944    A230      PUT3 LDX #IOCB3
B946    A8        :PUT TAY
B947    A90B      LDA #PUTCHR

```

```

B949  9D4203      STA ICCOM,X
B94C  A900        LDA #0
B94E  9D4803      STA ICBLL,X
B951  9D4903      STA ICBLLH,X
B954  98          TYA
B955  2056E4      JSR CIOV
B958  60          RTS

```

```

B959                                     INCLUDE D:CSETRTNS
PROC

```

```

*
*
*   O U T P U T   R O U T I N E
*
*
*

```

```

B959  2066B9      CASOUT  JSR OPNOUT
B95C  208FB9      JSR PUTOUT
B95F  208FB9      JSR PUTOUT
B962  20B0BC      JSR CLSOUT
B965  60          RTS

```

```

*
*
*   O P E N   R O U T I N E   -   P G   7 0   O F   0 5
*
*

```

```

B966  206CBC      OPNOUT  JSR BEEP2
B969  A980        LDA #BAUDL
B96B  8D04D2      STA AUDF3
B96E  A903        LDA #BAUDH
B970  8D06D2      STA AUDF4
B973  2004BC      JSR SENDEN
B976  A934        LDA #MOTRG0
B978  8D02D3      STA PACTL
B97B  A903        LDA #3
B97D  A202        LDX #2
B97F  A040        LDY #$40
B981  205CE4      JSR SETVBV
B984  A9FF        LDA #$FF
B986  8D2A02      STA CDTMF3
B989  AD2A02      LDA CDTMF3
B98C  D0FB ^B989  BNE *-3
B98E  60          RTS

```

```

*
*   P U T   R E C O R D   O U T
*

```

```

B98F                                     PROC
B98F      PUTOUT
B98F  A900        LDA #0
B991  8524        STA ICBALZ
B993  8DFE03      STA BLKADR

```

```

B996 A906 LDA #6
B998 8525 STA ICBALZ
B99A 8DFF03 STA BLKADR+1
B99D A000 :L05 LDY #0
B99F 843D STY BPTR
B9A1 B124 :L10 LDA (ICBALZ),Y
B9A3 A63D LDX BPTR
B9A5 9D0004 STA $400,X
B9A8 E63D INC BPTR
B9AA C99B CMP #$9B
B9AC F010 ^B9BE BEQ :L20
B9AE E624 INC ICBALZ
B9B0 D002 ^B9B4 BNE *+4
B9B2 E625 INC ICBALZ
B9B4 E07F CPX #127
B9B6 D0E9 ^B9A1 BNE :L10
B9B8 20C2B9 JSR WRBUF
B9BB 4C9DB9 JMP :L05
B9BE 20C2B9 :L20 JSR WRBUF
B9C1 60 RTS

*
*
* WRITE OUT BUFFER
*
*
B9C2 A955 WRBUF LDA #$55
B9C4 8DFC03 STA $3FC
B9C7 8DFD03 STA $3FD
* IS THIS NECESSARY?
B9CA A923 LDA #35
B9CC 8D0603 STA $306; DTIMLO
*
B9CF 2004BC JSR SENDEN
*
* THIS DETERMINES IRG
*
B9D2 A00F LDY #$0F
B9D4 A200 LDX #0
B9D6 20C6BB JSR SETVBX
*
B9D9 A934 LDA #MOTRG0
B9DB 8D02D3 STA PACTL
B9DE AD1703 LDA TIMFLG
B9E1 D0FB ^B9DE BNE *-3
B9E3 20F2BB JSR LDPNTR
B9E6 20FEB9 JSR SEND
* CAN SENDDS BE ELIMINATED?
B9E9 2057BC JSR SENDDS
*
B9EC 18 CLC
B9ED ADFE03 LDA BLKADR

```

```

B9F0 6980          ADC #128
B9F2 8DFE03        STA BLKADR
B9F5 ADFF03        LDA BLKADR+1
B9F8 6900          ADC #0
B9FA 8DFF03        STA BLKADR+1
*
B9FD 60            RTS
*
*
* SEND BUFFER
*
*
B9FE SEND
* CAN THIS SENDEN BE ELIMINATED?
B9FE 2004BC        JSR SENDEN
BA01 A000          LDY #0
BA03 8431          STY CHKSUM;
BA05 843B          STY CHKSNT;
BA07 843A          STY XMTDON
BA09 B132          LDA (BUFRLO),Y
BA0B 8D0DD2        STA SEROUT
BA0E 8531          STA CHKSUM
BA10 A53A          LDA XMTDON
BA12 F0FC ^BA10    BEQ *-2
BA14 60            RTS
*
*
*
* INPUT ROUTINE
*
*
BA15 202EBA        CASIN JSR OPNIN
BA18 A900          LDA #0
BA1A 85B5          STA SECFLG
BA1C 2054BA        JSR READIN
BA1F A901          LDA #1
BA21 85B5          STA SECFLG
BA23 A5B7          LDA BLKPTR
BA25 85B6          STA ENDPTR
BA27 2054BA        JSR READIN
BA2A 20BDBC        JSR CLSIN
BA2D 60            RTS
*
*
* OPEN FOR INPUT
*
*
BA2E OPNIN
BA2E 207CBC        JSR BEEP1
BA31 A934          LDA #MOTRG0

```



```

BA33 8D02D3          STA PACTL
BA36 A020            LDY #$20
BA38 A201            LDX #1
BA3A A903            LDA #3
BA3C 205CE4          JSR SETVBV
BA3F A9FF            LDA #$FF
BA41 8D2A02          STA CDTMF3
BA44 AD2A02          LDA CDTMF3
BA47 D0FB ^BA44      BNE *-3
BA49 A900            LDA #0
BA4B 8D8004          STA $480
BA4E A906            LDA #6
BA50 8D8104          STA $481
BA53 60              RTS

*
*
* READ IN RECORD
*
*
BA54                                PROC
BA54 A900            READIN LDA #0
BA56 85B7            STA BLKPTR
BA58 A5B5            :L01  LDA SECFLG
BA5A F006 ^BA62      BEQ :L02
BA5C A5B7            LDA BLKPTR
BA5E C5B6            CMP ENDPTR
BA60 F04C ^BAAE      BEQ :XIT
BA62 A900            :L02  LDA #0
BA64 8530            STA STATUS
BA66 20BFBA          JSR RDBLK
BA69 ADFF03          LDA $3FF
BA6C C9FF            CMP #$FF
BA6E D005 ^BA75      BNE :L03
BA70 68              :L025 PLA
BA71 68              PLA
BA72 4CC8BC          JMP ERRXIT
BA75 A5B5            :L03  LDA SECFLG
BA77 F016 ^BA8F      BEQ :L05
BA79 A6B7            LDX BLKPTR
BA7B BD8104          LDA $481,X
BA7E CDFF03          CMP BLKADR+1
BA81 D0D5 ^BA58      BNE :L01
BA83 BD8004          LDA $480,X
BA86 CDFE03          CMP BLKADR
BA89 D0CD ^BA58      BNE :L01
BA8B A530            LDA STATUS
BA8D D0E1 ^BA70      BNE :L025
BA8F ADFF03          :L05  LDA BLKADR
BA92 8524            STA ICBAHZ
BA94 ADFF03          LDA BLKADR+1
BA97 8525            STA ICBAHZ

```

```

BA99  A200          LDX #0
BA9B  BD0004        :L10  LDA $400,X
BA9E  A430          LDY STATUS; IF STAT <> 0 THEN
BAA0  D002 ^BAA4    BNE :L11 ; DON'T MOVE TO MEM
BAA2  9124          STA (ICBALZ),Y
BAA4  E624          :L11  INC ICBALZ
BAA6  D002 ^BAAA    BNE ++4
BAA8  E625          INC ICBALZ
BAAA  C99B          CMP #$9B
BAAC  D001 ^BAAF    BNE ++3
BAAE  60           :XIT  RTS
BAAF  E8           INX
BAB0  E080          CPX #$80
BAB2  D0E7 ^BA9B    BNE :L10
BAB4  A5B5          LDA SECFLG
BAB6  F0A0 ^BA58    BEQ :L01
BAB8  E6B7          INC BLKPTR
BABA  E6B7          INC BLKPTR
BABC  4C58BA        JMP :L01

```

*

*

* READ IN BLOCK

*

*

BABF RDBLK

* IS THIS NECESSARY?

```

BABF  A923          LDA #35
BAC1  8D0603        STA DTIMLO

```

*

```

* THIS SECTION SETS IRG. THIS IS
* THE SECTION WE WILL MODIFY TO WAIT
* FOR THE IRG.

```

*

```

* THIS SECTION HAS BEEN COMMENTED
* OUT. THE WAIT LOOP IS NOW IN
* 'BEGIN'.

```

*

```

* LDY #$A
* LDX #0
* JSR SETVBX
* LDA TIMFLG
* BNE *-3

```

```

BAC4  20F2BB        JSR LDPNTR
BAC7  20E3BB        JSR STTMOT
BACA  20C6BB        JSR SETVBX
BACD  20D7BA        JSR BEGIN
BAD0  209CBB        JSR RECEIV
BAD3  2057BC        JSR RECVD5
BAD6  60           RTS

```

*

*

* THIS SECTION CALCS BAUD RATE

*
*

BAD7 78

BEGIN SEI

*

* THIS IS THE NEW 'WAIT FOR IRG'
* CODE. IT IS A WAIT LOOP ABOUT
* HALF AS LONG AS AN IRG. IF A
* HIGH IS SEEN ON THE SERIAL LINE
* BEFORE THIS LOOP IS FINISHED IT
* WILL START OVER. THIS SHOULD
* FORCE THE BAUD RATE RTN TO WAIT
* FOR IRG.

*

BAD8	A008	BEGIN1	LDY #8
BADA	A200		LDX #0
BADC	20C6BB		JSR SETVBX
BADF	AD0FD2		LDA SKSTAT
BAE2	2910		AND #\$10
BAE4	D0F9 ^BADF		BNE *-5
BAE6	AE1703		LDX TIMFLG
BAE9	D0ED ^BAD8		BNE BEGIN1

*

BAEB	8D1603		STA SAVIO
BAEE	AE0BD4		LDX VCOUNT
BAF1	A414		LDY RTCLOK+2
BAF3	8E0C03		STX TIMER1
BAF6	8C0D03		STY TIMER1+1
BAF9	A013		LDY #19
BAFB	AD0FD2	COUNT	LDA SKSTAT
BAFE	2910		AND #\$10
BB00	CD1603		CMP SAVIO
BB03	F0F6 ^BAFB		BEQ COUNT
BB05	8D1603		STA SAVIO
BB08	88		DEY
BB09	D0F0 ^BAFB		BNE COUNT
BB0B	AD0BD4		LDA VCOUNT
BB0E	A414		LDY RTCLOK+2
BB10	202CBB		JSR COMPUT

*

BB13	A900	GOREAD	LDA #0
BB15	8D0FD2		STA SKSTAT
BB18	AD3202		LDA SSKCTL
BB1B	8D0FD2		STA SKSTAT
BB1E	A9AA		LDA #\$AA
BB20	8531		STA CHKSUM
BB22	A9FE		LDA #\$FE

```

BB24 8532          STA BUFRLO
BB26 A903          LDA #3
BB28 8533          STA BUFRHI
BB2A 58            CLI
BB2B 60            RTS

*
*
*
BB2C 8D0103        COMPUT STA TIMER2
BB2F 8C0203        STY TIMER2+1
BB32 20BABB        JSR ADJUST
BB35 8D0103        STA TIMER2
BB38 AD0C03        LDA TIMER1
BB3B 20BABB        JSR ADJUST
BB3E 8D0C03        STA TIMER1
BB41 AD0103        LDA TIMER2
BB44 38            SEC
BB45 ED0C03        SBC TIMER1
BB48 8D1203        STA TEMP1
BB4B AD0203        LDA TIMER2+1
BB4E 38            SEC
BB4F ED0D03        SBC TIMER1+1
BB52 A8            TAY
BB53 A97D          LDA #$7D
BB55 18            HITIMR CLC
BB56 6983          ADC #$83
BB58 88            DEY
BB59 10FA ^BB55    BPL HITIMR
BB5B 18            CLC
BB5C 6D1203        ADC TEMP1
BB5F 38            FINDX SEC
BB60 E960          SBC #$60
BB62 8D1603        STA SAVIO
      = 0301        TBDLO  = TIMER2
      = 0302        TBDHI  = TIMER2+1
BB65 A93E          LDA #$3E
BB67 8D0103        STA TBDLO
BB6A A902          LDA #2
BB6C 8D0203        STA TBDHI
BB6F A006          LDY #6
BB71 18            FIND1 CLC
BB72 AD0103        LDA TBDLO
BB75 6D1603        ADC SAVIO
BB78 8D0103        STA TBDLO
BB7B AD0203        LDA TBDHI
BB7E 6900          ADC #0
BB80 8D0203        STA TBDHI
BB83 88            DEY
BB84 D0EB ^BB71    BNE FIND1
BB86 AD0103        LDA TBDLO
BB89 8D04D2        STA AUDF3

```

```

BB8C AD0203          LDA TBDHI
BB8F 8D06D2          STA AUDF4
BB92 C904            CMP #4; TO SEE IF BAUD RATE
BB94 9005 ^BB9B      BCC FIND2; GROSSLY WRONG
BB96 68              PLA
BB97 68              PLA
BB98 4CD8BA          JMP BEGIN1
BB9B 60              FIND2 RTS

```

*
*
*

```

BB9C RECEIV
BB9C A900            LDA #0
BB9E 8538            STA BUFRFL
BBA0 8539            STA RECVDN
BBA2 2026BC          JSR RECVEN
BBA5 A900            LDA #0
BBA7 8530            STA STATUS
BBA9 A93C            LDA #NCOMHI; $3C
BBAB 8D03D3          STA PBCTL; $D303
BBAE A539            LDA RECVDN
BBB0 F0FC ^BBAE      BEQ *-2
BBB2 A5B5            LDA SECFLG
BBB4 D003 ^BBB9      BNE *+5
BBB6 20CFBC          JSR CHKBLK
BBB9 60              RTS

```

*
*
*
*
*

SUBROUTINES

```

BBBA C97C            ADJUST CMP #$7C
BBBC 3004 ^BBBC2      BMI ADJ1
BBBE 38              SEC
BBBF E97C            SBC #$7C
BBC1 60              RTS
BBC2 18              ADJ1 CLC
BBC3 6907            ADC #7
BBC5 60              RTS

```

*
*
*

```

BBC6 A9DD            SETVBX LDA #STMFLG&#FF
BBC8 8D2602          STA CDTMA1
BBCB A9BB            LDA #STMFLG/256
BBCD 8D2702          STA CDTMA1+1
BBD0 A901            LDA #1
BBD2 78              SEI
BBD3 205CE4          JSR SETVBV
BBD6 A901            LDA #1
BBD8 8D1703          STA TIMFLG

```

```

BBDB 58          CLI
BBDC 60          RTS
*
*
BBDD A900        STMFLG LDA #0
BBDF 8D1703      STA TIMFLG
BBE2 60          RTS
*
*
BBE3 AD0603      STTMOT  LDA DTIMLO; P.54 OF OS LIST
BBE6 6A          ROR A
BBE7 6A          ROR A
BBE8 A8          TAY
BBE9 293F        AND #$3F
BBEB AA          TAX
BBEC 98          TYA
BBED 6A          ROR A
BBEE 29C0        AND #$C0
BBF0 A8          TAY
BBF1 60          RTS
*
*
BBF2            LDPNTR
BBF2 18          CLC
BBF3 A9FC        LDA #$FC
BBF5 8532        STA BUFRLO
BBF7 6984        ADC #132
BBF9 8534        STA BFENLO
BBFB A903        LDA #3
BBFD 8533        STA BUFRHI
BBFF 6900        ADC #0
BC01 8535        STA BFENHI
BC03 60          RTS
*
*
BC04 A907        SENDEN LDA #$07
BC06 2D3202      AND SSKCTL; $232
BC09 0920        ORA #$20
BC0B 0908        ORA #$08
BC0D A007        LDY #$07
BC0F 8C02D2      STY AUDF2; $D202
BC12 A005        LDY #$05
BC14 8C00D2      STY AUDF1; $D200
BC17 8D3202      STA SSKCTL; $232
BC1A 8D0FD2      STA SKCTL; $D20F
BC1D A9C7        LDA #$C7
BC1F 2510        AND POKMSK; $125
BC21 0910        ORA #$10
BC23 4C3CBC      JMP CONTIN
BC26 A907        RECVEN  LDA #$07
BC28 2D3202      AND SSKCTL

```

59.
 49.
 66
 1294
 29460
 54 3234
 54

```

BC2B 0910          ORA #10
BC2D 8D3202        STA SSKCTL
BC30 8D0FD2        STA SKCTL
BC33 8D0AD2        STA SKRES
BC36 A9C7          LDA #C7
BC38 2510          AND POKMSK
BC3A 0920          ORA #20
BC3C 8510          CONTIN STA POKMSK
BC3E 8D0ED2        STA IRQEN; $D20E
BC41 A928          LDA #28
BC43 8D08D2        STA AUDCTL
BC46 A206          LDX #6
BC48 A9A8          LDA #A8
BC4A 9D01D2        NOISE1 STA AUDC1,X; $D201
BC4D CA           DEX
BC4E CA           DEX
BC4F 10F9 ^BC4A    BPL NOISE1
BC51 A9A0          LDA #A0
BC53 8D05D2        STA AUDC3; $D205
BC56 60           RTS

*
*
BC57              SENDDS
BC57              RECVDS
BC57 A9C7          LDA #C7
BC59 2510          AND POKMSK
BC5B 8510          STA POKMSK
BC5D 8D0ED2        STA IRQEN
BC60 A206          LDX #6
BC62 A900          LDA #0
BC64 9D01D2        ZERIT  STA AUDC1,X
BC67 CA           DEX
BC68 CA           DEX
BC69 10F9 ^BC64    BPL ZERIT
BC6B 60           RTS

*
*
BC6C 2091BC        BEEP2  JSR BEEP
BC6F C640          DEC $40
BC71 F00C ^BC7F    BEQ KEYINT
BC73 8A           TXA
BC74 18           CLC
BC75 690A          ADC #10
BC77 AA           TAX
BC7B E414          CPX $14; RTCLOK+2
BC7A D0FC ^BC7B    BNE *-2
BC7C 2091BC        BEEP1  JSR BEEP
BC7F A9FF          KEYINT LDA #FF
BC81 8DFC02        STA 764
BC84 ADFC02        KEYCHK LDA 764
BC87 C9FF          CMP #FF

```

```

BC89 F0F9 ^BC84      BEQ KEYCHK
BC8B A9FF             LDA #$FF
BC8D 8DFC02           STA 764
BC90 60               RTS

*
*

BC91 A514             BEEP      LDA $14; RTCLOK+2
BC93 18               CLC
BC94 691E             ADC #30
BC96 AA               TAX
BC97 A9FF             WFL        LDA #$FF
BC99 8D1FD0           STA $D01F; CONSOL
BC9C A900             LDA #0
BC9E A0F0             LDY #$F0
BCA0 88               DEY
BCA1 D0FD ^BCA0       BNE *-1
BCA3 8D1FD0           STA $D01F; CONSOL
BCA6 A0F0             LDY #$F0
BCA8 88               DEY
BCA9 D0FD ^BCA8       BNE *-1
BCAB E414             CPX $14; RTCLOK+2
BCAD D0E8 ^BC97       BNE WFL
BCAF 60               RTS

*
*

BCB0 A282             CLSOUT    LDX #130
BCB2 A9FF             LDA #$FF
BCB4 9DFD03           ZTBUF     STA $3FD,X
BCB7 CA               DEX
BCB8 D0FA ^BCB4       BNE ZTBUF
BCBA 20C2B9           JSR WRBUF
BCBD A93C             CLSIN     LDA #MOTRST
BCBF 8D02D3           STA PACTL
BCC2 A903             LDA #3
BCC4 8D0FD2           STA SKCTL
BCC7 60               RTS

*
*

BCC8 A9FF             ERRXIT   LDA #$FF
BCCA 8530             STA STATUS
BCCC 4CBDBC           JMP CLSIN

*
*

BCCF                 PROC
BCCF A6B7             CHKBLK   LDX BLKPTR
BCD1 A530             LDA STATUS
BCD3 F006 ^BCDB       BEQ :L10
BCD5 20F8BC           JSR :COPY
BCD8 4CEBBC           JMP :XIT
BCDB BDB104           :L10     LDA $481,X
BCDE CDFF03           CMP BLKADR+1
BCE1 900C ^BCEF       BCC :BAD

```



```

BCE3 BD8004 LDA $480,X
BCE6 CDFE03 CMP BLKADR
BCE9 9004 ^BCEF BCC :BAD
BCEB 2009BD :XIT JSR :ADD
BCEE 60 RTS
BCEF 20F8BC :BAD JSR :COPY
BCF2 2009BD JSR :ADD
BCF5 4CDBBC JMP :L10

*
BCF8 BD8004 :COPY LDA $480,X
BCFB 9D8204 STA $482,X
BCFE BD8104 LDA $481,X
BD01 9D8304 STA $483,X
BD04 E6B7 INC BLKPTR
BD06 E6B7 INC BLKPTR
BD08 60 RTS

*
BD09 A6B7 :ADD LDX BLKPTR
BD0B 18 CLC
BD0C BD8004 LDA $480,X
BD0F 6980 ADC #128
BD11 9D8004 STA $480,X
BD14 BD8104 LDA $481,X
BD17 6900 ADC #0
BD19 9D8104 STA $481,X
BD1C 60 RTS

*
*
BD1D A984 COLORS LDA #$84
BD1F 8DC602 STA 710
BD22 8DC802 STA 712
BD25 A98C LDA #$8C
BD27 8DC502 STA 709
BD2A 60 RTS

*
*
BD2B A91D TONE LDA #29
BD2D 8D00D2 STA $D200
BD30 A9AC LDA #$AC
BD32 8D01D2 STA $D201
BD35 A514 LDA $14
BD37 18 CLC
BD38 6905 ADC #5
BD3A 85B0 STA TONHLD
BD3C A514 TONE1 LDA $14
BD3E C5B0 CMP TONHLD
BD40 90FA ^BD3C BCC TONE1
BD42 A900 LDA #0
BD44 8D01D2 STA $D201
BD47 60 RTS

```

```

*
*
BD48 AD3002      DLIST  LDA $230
BD4B 8580         STA R1
BD4D AD3102      LDA $231
BD50 8581         STA R1+1
BD52 A003         LDY #3
BD54 B180         LDA (R1),Y
BD56 0980         ORA #$80
BD58 9180         STA (R1),Y
BD5A A96A         LDA #DLIRTN& $FF
BD5C 8D0002      STA $200
BD5F A9BD         LDA #DLIRTN/256
BD61 8D0102      STA $201
BD64 A9C0         LDA #192
BD66 8D0ED4      STA $D40E
BD69 60          RTS

*
BD6A 48          DLIRTN PHA
BD6B A9B4         LDA #$B4
BD6D 8D0AD4      STA $D40A
BD70 8D18D0      STA $D018
BD73 68          PLA
BD74 40          RTI

*
*
                INCLUDE D:FRONTEND
BD75                PROC
BD75                FRONTEND
BD75 A900         LDA #0
BD77 8580         STA R1
BD79 8582         STA R2
BD7B 8DE502      STA MEMTOP
BD7E ADF402      LDA 756; CHBAS
BD81 8581         STA R1+1
BD83 AEE602      LDX MEMTOP+1
BD86 CA          DEX
BD87 CA          DEX
BD88 CA          DEX
BD89 CA          DEX
BD8A 8683         STX R2+1
BD8C 8EF402      STX 756; CHBAS
BD8F 8EE602      STX MEMTOP+1

*
*   NEW CHAR SET AT TOP OF FREE RAM
*
BD92 A204         LDX #4
BD94 A000         LDY #0
BD96 B180         :LBL10 LDA (R1),Y
BD98 9182         STA (R2),Y
BD9A 88          DEY

```

```

BD9B D0F9 ^BD96      BNE :LBL10
BD9D E681            INC R1+1
BD9F E683            INC R2+1
BDA1 CA              DEX
BDA2 D0F2 ^BD96      BNE :LBL10
*
*   MOVE NEW CHAR TO SET
*
BDA4 AEF402          LDX 756; CHBAS
BDA7 E8              INX
BDA8 E8              INX
BDA9 E8              INX
BDAA 8683            STX R2+1
BDAC A908            LDA #8
BDAE 8582            STA R2
BDB0 A90F            LDA #:NEWCHRS&#xFF
BDB2 8580            STA R1
BDB4 A9BE            LDA #:NEWCHRS/256
BDB6 8581            STA R1+1
BDB8 A090            LDY #18*8
BDDBA B180           :LBL11 LDA (R1),Y
BDBC 9182            STA (R2),Y
BDDE 88              DEY
BDBF D0F9 ^BDDBA     BNE :LBL11
BDC1 B180            LDA (R1),Y
BDC3 9182            STA (R2),Y
*
*   MODIFY DISPLAY LIST
*
BDC5 AD3002          LDA $230
BDC8 8580            STA R1
BDCA AD3102          LDA $231
BDCD 8581            STA R1+1
BDCE A906            LDA #6
BDD1 A006            LDY #6
BDD3 9180           :LBL20 STA (R1),Y
BDD5 C8              INY
BDD6 C00A            CPY #10
BDD8 D0F9 ^BDD3      BNE :LBL20
BDDBA A982            LDA #$82
BDDC 9180            STA (R1),Y
BDDE A00F            LDY #15
BDE0 9180            STA (R1),Y
BDE2 A940            LDA #$40
BDE4 8D0ED4          STA $D40E
BDE7 A9F7            LDA #:DLIRTN&#xFF
BDE9 8D0000          STA $200
BDEC A9BD            LDA #:DLIRTN/256
BDEE 8D0102          STA $201
BDF1 A9C0            LDA #192
BDF3 8D0ED4          STA $D40E

```

```

BDF6 60 RTS
*
*
BDF7 48 :DLIRTN PHA
BDF8 8A TXA
BDF9 48 PHA
BDFA A980 LDA #$80
BDFC AE0BD4 LDX $D40B; VCOUNT
BDFE E032 CPX #50
BE01 3002 ^BE05 BMI *+4
BE03 A98C LDA #$8C
BE05 8D0AD4 STA $D40A
BE08 8D17D0 STA $D017
BE0B 68 PLA
BE0C AA TAX
BE0D 68 PLA
BE0E 40 RTI
*
*
*
*:RTN2 PHA
* TXA
* PHA
* LDA VCOUNT
* CMP #50
* BCS :SECND
*:FIRST LDA #$80
* STA WSYNC
* STA $D017; COLOR REG
* LDA MEMTOP+1
* STA CHBAS
* BNE :OUT
*:SECND LDA #$8C
* STA WSYNC
* STA $D017; COLOR REG
* LDA #$E0; DEFAULT CHAR BASE
* STA CHBAS
*:OUT PLA
* TAX
* PLA
* RTI
*
*
BE0F :NEWCHRS
BE0F 0F0F0F0F0F :A 97 DB 15,15,15,15,15,15,15,15
BE17 F0F0F0F0F0 :B 98 DB 240,240,240,240,240,240,240,240
BE1F FFFF007F7F :C 99 DB 255,255,0,127,127,127,127,127
BE27 FFFF000F0F :D 100 DB 255,255,0,15,15,15,15,15
BE2F FFFF00E0E0 :E 101 DB 255,255,0,224,224,224,224,224
BE37 C000000000 :F 102 DB 192,0,0,0,0,0,0,0
BE3F FF00FFFFFF :G 103 DB 255,0,255,255,255,255,255,255

```

```

BE47 0F0F9FFFFFFF :H 109 DB 15,15,159,255,255,255,255,255
BE4F FFF0FFFFFFF :I 105 DB 255,240,255,255,255,255,255,255
BE57 E101F3FFFF :J 106 DB 225,1,243,255,255,255,255,255
BE5F FCFCFCFCF8 :K 107 DB 252,252,252,252,248,248,240,224
BE67 00C0E0F0F8 :L 108 DB 0,192,224,240,248,248,252,252
BE6F FFFFFFFF :M 109 DB 255,255,255,255,255,255,255,243
BE77 0003B7CFEF :N 110 DB 0,3,135,207,239,239,255,255
BE7F FCFFFFFFF :O 111 DB 252,255,255,255,255,255,255,159
BE87 030F1F3F7F :P 112 DB 3,15,31,63,127,127,255,255
BE8F C0F0F8FCFE :Q 113 DB 192,240,248,252,254,254,254,255
BE97 3F7FBFDFEF :R 114 DB 63,127,191,223,239,239,239,241
*
*
BE9F SCDATA
* DATA FOR "MICROFILER"
BE9F 00412D2923 DB 0,65,45,41,35,50,47,38,41,44,37,50,0,63
* DATA FOR "FROM" ON
BEAD 26322F2D00 DB 38,50,47,45,0,67,112,111
BEB5 7271706F6E DB 114,113,112,111,110,109,108,0,2,45,41,35,50,47,34,41,52:
BEC9 8061628067 DB 128,97,98,128,103,104,105,106,107,0,2,48,37,50,41,48,40:
BEDD 2C00138061 DB 44,0,19,128,97,98,128,99,77,100,101,102,0,2,48,50,47,36:
BEF1 3433000129 DB 52,51,0,1,41,46,35,0,100,34,57,0,1,42,41,45,0,1,40,33,5:
BF0A 2E00153225 DB 46,0,21,50,37,54,14,0,1,17,14,18,12,0,1
BF19 232F303932 DB 35,47,48,57,50,41,39,40,52,0,1,17,25,24,19,0,140
BF2A 80B3A5ACA5 DB 128,179,165,172,165,163,180,128,169,175,174,154,128,0,64,17,14,
BF32 AFB0B4A9AF DB 175,176,180,169,175,174,154,128,0,64,17,14,
BF3E 0001233225 DB 0,1,35,50,37,33,52,37,0,1 CREATE FILE
BF48 26292C2500 DB 38,41,44,37,0,26,18,14,0,1,44,47,33,36,0,1
BF58 26292C2500 DB 38,41,44,37,0,28 LOAD FILE
BF5E 130E000132 DB 19,14,0,1,50,37,51,53,45,37,0,141
3 - RESUME
*
*
BF6A PROC
BF6A A9E0 UNDO LDA #E0
BF6C 8DF402 STA 756; CHARBASE
BF6F AD3002 LDA #230
BF72 8580 STA R1
BF74 AD3102 LDA #231
BF77 8581 STA R1+1
BF79 A006 LDY #6
BF7B A902 LDA #2
BF7D 9180 :L10 STA (R1),Y
BF7F C8 INY
BF80 C011 CPY #17
BF82 D0F9 ^BF7D BNE :L10
BF84 60 RTS
EPROC
*
*
*

```

BY JIM HARRISON 15
64 VERSION BY WILLIAM BROWN 26

```

BF85          PROC
BF85  A5C6      MEMRY  LDA RECLNG
BF87  85D4      STA FR0
BF89  A5C7      LDA RECLNG+1
BF8B  85D5      STA FR0+1
BF8D  20AAD9    JSR IFP
BF90  20B6DD    JSR FMOVE
BF93  38        SEC
BF94  ADE502    LDA MEMTOP
BF97  E5C4      SBC BUFEND
BF99  85D4      STA FR0
BF9B  ADE602    LDA MEMTOP+1
BF9E  E5C5      SBC BUFEND+1
BFA0  85D5      STA FR0+1
BFA2  20AAD9    JSR IFP
BFA5  2028DB    JSR FDIW
BFA8  20E6D8    JSR FASC
BFAB  A213      LDX #19
BFAD  207FA6    JSR MESSAGES
BFB0  18        CLC
BFB1  A558      LDA #58
BFB3  69AC      ADC ##AC
BFB5  8590      STA R9
BFB7  A559      LDA #59
BFB9  6903      ADC #3
BFBB  8591      STA R9+1
BFBD  A0FF      LDY ##FF
BFBF  C8        :L10  INY
BFC0  B1F3      LDA (INBUFF),Y
BFC2  C92E      CMP ##2E; DEC POINT
BFC4  F009 ^BFCF BEQ :L20
BFC6  18        CLC
BFC7  6960      ADC ##60
BFC9  0980      ORA ##80
BFCE  9190      STA (R9),Y
BFCD  90F0 ^BFBF BCC :L10; CARRY WILL BE SET IF LAST NUMBER WAS INVE
BFCF  60        :L20  RTS
*
*
BFD0  A914      COLRON LDA ##14
BFD2  8DC602    STA 710
BFD5  60        RTS
*
*
BFD6  A984      COLROF LDA ##84
BFD8  8DC602    STA 710
BFDB  A211      LDX #17
BFDD  207FA6    JSR MESSAGES
BFE0  60        RTS
*
*  THIS SUBROUTINE IS DESIGNED TO

```

* DISABLE THE ATARI LOGO KEY AND
* THE CAPS LOWER KEY
*

```

BFE1          PROC
BFE1 C93C      CLRKEY  CMP #60
BFE3 F005 ^BFEA BEQ :L1
BFE5 C927      CMP #39
BFE7 F001 ^BFEA BEQ :L1
BFE9 60        RTS
BFEA A9FF      :L1    LDA #255
BFEC 60        RTS
              EPROC
BFED 60        INITLZ RTS

```

*
*
*

*

* DATA DEFINITIONS

*

LIST L

```

BFEE 4B3A9B    KEYBRD DB 'K:',EOL
BFF1 453A9B    EDITOR DB 'E:',EOL
BFF4 433A9B    CASSET DB 'C:',EOL
BFF7 503A9B    PRINTR DB 'P:',EOL
          = 0600  SCRNBFF = $600
          = 09C0  ✓ FLDDAT = SCRNBFF+960 ✓
BFFA = BFFA    ORG $BFFA

```

T R C L

*
* CARTRIDGE BOOT DATA
*

```

BFFA 00A0      DW $A000 ;CART START ADDR
BFFC 00        DB 0
BFFD 04        DB 4
BFFE EDBF      DW INITLZ ;CART INIT ADDR

```

*
END START

no ERRORS, 775 Labels, \$0602 free.

S	ADD16	mac	12/12	17/29	23/53	29/25	29/43	37/22	40/19
			49/1	45# 6	10# 7	0#12	255#<7	0/ 0	
	ADJ1	BBC2	73/37	73#41					
	ADJUST	BBBA	72/15	72/18	73#36				
S	AFP	D800	62/53	64/11					
	ANL1	A298	7/46	7#50					
	ANL2	A2BB	7/44	8#15					
	ANL3	A2BF	7/49	8/14	8#17				
	ANL4	A2D3	8/20	8#27					
	ANLTOP	A282	7#41	8/28	8/30				
	ANLX1	A2E9	8#36	8/41					
	ANLXIT	A2DB	8/24	8#31					
S	AUDC1	D201	75/18	75/35					
S	AUDC3	D205	75/23						
S	AUDCTL	D208	75/15						
S	AUDF1	D200	74/47						
S	AUDF2	D202	74/45						
S	AUDF3	D204	66/33	72/55					
S	AUDF4	D206	66/35	73/ 6					
	AVGFLG	00D3	33# 9	34/25	36/35	36/38	63/25	64/37	
S	BAUDH	0003	66/34						
S	BAUDL	0080	66/32						
	BEEP	BC91	4/39	9/25	11/15	26/40	75/42	75/51	76#11
	BEEP1	BC7C	68/54	75#51					
	BEEP2	BC6C	66/31	75#42					
	BEGIN	BAD7	70/50	71# 9					
	BEGIN1	BAD8	71#21	71/28	73/11				
S	BFENHI	0035	74/36						
S	BFENLO	0034	74/32						
	BLD1	A37A	9/55	10# 7					
	BLD11	A393	10/11	10#19					
	BLD2	A39F	10/ 9	10#26					
	BLD21	A3A6	10/27	10#29					
	BLD3	A3B0	9/53	10#33					
	BLD31	A3B7	10/34	10#36					
	BLD4	A3C8	10/37	10#44					
	BLD6	A3DA	10/25	10/32	10/51	10#54			
	BLDBUF	A365	7/42	9#48					
S	BLKADR	03FE	66/55	67/ 7	67/55	68/ 6	68/ 7	68/ 9	69/45
			69/48	69/52	69/54	76/54	77/ 6		
	BLKFLG	0086	7#31	9/54	9/56	10/36	10/38	10/52	
S	BLKPTR	00B7	68/43	69/26	69/29	69/43	70/21	70/22	76/48
			77/18	77/19	77/22				
	BLNKRT	A5DE	12/32	17# 7	50/35	54/16			
S	BPTR	003D	67/ 9	67/11	67/13				
	BROWSE	00CC	32#54	35/31	37/19	37/46	48/19		
	BUFEND	00C4	27/44	27/47	28/10	28/12	29/26	29/28	29/29
			29/31	32#50	34/20	34/28	34/37	34/39	34/40
			34/42	41/29	41/31	41/32	41/34	58/56	59/ 7

	63/17	63/22	82/14	82/17		
BUFFPT 0087	14#48	15/22	15/23	15/37	15/51	

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	BUFPTR 0087	7#32	9/30	9/51	10/13	10/17	10/19	10/29
		26/19	15#16	84/69	160/ 0	168/ 0	67/75	100/:3
		0/ 0	7/ 1	0/ 0				
s	BUFRFL 0038	73/18						
s	BUFRHI 0033	72/ 7	74/34					
s	BUFRLO 0032	68/24	71/56	74/30				
	BUFTOP 00C2	32#49	34/19	34/27	37/49	37/52	44/48	44/50
		46/32	46/34	47/30	47/32	48/13	48/15	59/14
		59/17	62/33	62/37				
	CASIN BA15	22/18	68#37					
	CASOUT B959	24/22	66#21					
n	CASSET BFF4	83#29						
s	CDTMA1 0226	73/48	73/50					
s	CDTMF3 022A	66/44	66/45	69/11	69/12			
	CHKBLK BCCF	73/29	76#48					
s	CHKSNT 003B	68/22						
s	CHKSUM 0031	68/21	68/26	71/54				
	CHNFLG 00CD	29/19	29/53	32#55	34/23	38/34		
	CHNGDA AC06	28#19	38/35					
	CHRRPL AD95	5/28	11/52	22/36	23/29	24/55	26/39	32#36
		64/32						
s	CIOV E456	1/20	1/33	4/29	49/41	49/49	64/52	65/23
		65/33	65/48	66/10				
s	CIX 00F2	62/51	64/10					
	CLEAR B2B1	2/36	47/19	47#30				
	CLEN1 A21A	6#27	6/29					
	CLEN2 A21F	6/24	6#30					
	CLENRO A212	5/34	5/49	6#23				
s	CLOSE mac	4/26	49/46	65/30				
s	CLOSE 000C	4/27	49/47	65/31				
	CLOSUP B04D	38/48	40#12					
	CLRKEY BFE1	12/38	35/44	83# 9				
	CLSIN BCB0	68/46	76#36	76/44				
	CLSOUT BCB0	66/24	76#30					
	CNTPTR 00D0	29/34	29/36	29/38	29/40	33# 7	33/41	33/44
	COLCNT 0084	7#29	7/55	8/17	8/18	8/26		
	COLORS BD1D	1/49	77#34					
	COLROF BFD6	3/34	4/ 6	4/ 8	4/33	38/15	38/26	38/39
		38/42	82#49					
	COLRON BFD0	3/16	35/38	46/53	82#44			
	COMPUT BB2C	71/47	72#13					
	CONREG 00BB	3# 9	33/27	33/30	33/32	33/34	33/46	33/49
		33/51	33/53	34/47	34/51	34/55	34/56	35/ 9
		35/10	35/11	35/13	35/17	35/19	35/20	35/22
		55/40	55/42	55/45				
	CONTIN BC3C	74/53	75#12					
	CONVER AE36	33/31	33/50	34#47	55/43			
	COUNT BAFB	71#38	71/41	71/44				
	CTRHI 0085	14#46	15/12	16/12				

CTRLD 0084	14#45	15/14	16/10				
CURPTR 00CA	32#53	34/21	34/29	37/23	37/25	37/26	37/28

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		37/30	37/35	37/37	37/38	37/40	37/48	37/51
		11#<3	101#78	0/79	155/ 0	12#73	131/83	83#37
		0/;9	36/39	45# 6	10# 7	0#;2	255#<7	0/ 0
		21#29	23/14					
		21#28	23/12					
		21#26	21/47	22/55	23/10	26/20		
		16/ 8	16#10					
		2/26	4#47					
		78/15	78/17	78#23				
		2/43	78# 7					
		21#31	22/48	23/18	24/30			
		21#30	22/46	23/16	24/28			
		21#32	22/49	22/56	23/ 6	23/19	24/31	26/21
		21#27	21/39	22/14				
s		70/32	74/14					
		21#25	22/53					
		28/43	30#10					
		1/25	1/27	83#28				
s		68/44	69/30					
		3/36	4/14	11#27	38/20	38/28		
s		4/20	9/15	21/51	22/34	29/21	37/31	40/29
		44/27	44/54	45/26	46/21	46/38	47/36	49/17
		56/42	57/53	62/48	64/35	64/40	64/55	83/27
		83/28	83/29	83/30				
		12/52	13/25	18/38	29/54	30/16	30/46	31/42
		33# 6	34/24					
		69/40	76#42					
s		62/54	64/12					
s		63/40	64/13	82/21				
s		63/39	82/20					
		72#45	72/53					
		73/ 8	73#12					
n		72#35						
		7/28	7/47	7/50	7/53	7/56	8/ 9	8/12
		8/31	8/33	8/34	8/37	8/39	8/52	8/53
		9/ 9	9/18	83#32				
		7#33	7/45	8/13	8/16	10/10	10/26	10/33
		11/42	11/44	30/34	32#48	33/14	33/17	33/20
		33/26	33/29	33/40	33/43	33/45	33/48	34/ 8
		34/11	34/14	40/48	40/50	50/15	52/18	52/21
		57/13	57/24	61/48	61/56	62/16	62/27	62/30
		62/41						
s		63/28	63/30					
s		62/44	63/37	63/55	82/11			
		4/ 7	49#53	50/56				
		47/22	56#14					
s		63/33	63/35	82/ 7	82/ 9	82/15	82/18	
		1/50	78#33					
		2/22	5/50	13/26	25/23	36/12	38/45	51/12

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s	GETCHR	0007	65/43						
n	GOREAD	BB13	71#49						
	HITIMR	BB55	72#29	72/32					
	HLDA	0088	14#49	15/36	15/41				
	HOLDA	00BD	3#10	9/50	10/ 7	10/56	36/16	36/22	62/47
			62/56	64/31	64/33				
	HOLDX	00BE	3#11	9/49	10/55	24/54	50/37	50/39	51/11
			51/13	53/31	53/34	53/52	55/30	55/46	57/33
			57/36	58/18	58/21	62/ 9	62/12		
	HOLDY	00BF	3#12	9/48	10/54	53/53	54/32	54/36	55/39
			55/44	57/32	57/35	58/17	58/20	62/ 8	62/11
s	ICAX1	034A	1/17	1/30	65/20				
s	ICAX2	034B	1/19	1/32	65/22				
s	ICBAH	0345	1/15	1/28	49/36	64/48	65/18		
s	ICBAHZ	0025	24/21	67/ 6	67/18	69/55	70/12		
s	ICBAL	0344	1/13	1/26	49/34	64/46	65/16		
s	ICBALZ	0024	24/19	66/54	67/10	67/16	69/53	70/ 9	70/10
s	ICBLH	0349	49/40	64/51	65/47	66/ 8			
s	ICBLL	0348	49/38	64/50	65/46	66/ 7			
s	ICCOM	0342	1/11	1/24	4/28	49/32	49/48	64/44	65/14
			65/32	65/44	65/56				
s	ICDND	0341							
s	ICHID	0340							
s	ICPTH	0347							
s	ICPTL	0346							
s	ICSTA	0343	65/25						
s	IFP	D9AA	63/36	82/10	82/19				
	INBFPT	A5A2	9/29	10/ 6	10/15	10/28	10/31	10/35	10/41
			10/53	15/25	15/39	15#51			
	INBFXT	A5A8	15/52	15#54					
	INBLNK	A5C5	12/28	16#43	50/11	53/41			
s	INBUFF	00F3	62/36	62/39	62/46	62/49	63/ 6	63/ 9	63/11
			63/12	63/14	63/16	63/21	63/45	64/ 6	64/ 8
			64/18	64/21	64/29	64/36	64/41	64/45	64/47
			82/33						
	INITLZ	BFED	83#17	83/40					
	INSCPT	A5A9	15/34	15/44	16# 7				
	INSCXT	A5B7	16/11	16#14					
s	IOCB1	0010	1/ 9	65/40					
s	IOCB2	0020	1/22	64/42	65/42	65/51			
s	IOCB3	0030	4/26	49/30	49/46	65/12	65/24	65/30	65/53
s	IRQEN	D20E	75/13	75/32					
	KEY1	AD70	32# 8	32/ 9	32/11				
	KEYBRD	BFEE	1/12	1/14	83#27				
	KEYCHK	BC84	75#54	75/56					
	KEYDLA	AD6C	12/29	13/ 6	31#56	32/14	35/50	47/11	50/13
			50/38	50/48	54/11				
	KEYINT	BC7F	75/44	75#52					
	LDD1	A3F8	2/35	11/13	11#17				

LDDATA A3E1 2/40 11# 8
LDPNTR BBF2 67/49 70/47 74#27

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	LOAD	AFF4	37/44	38/13	38#52	46/47			
	LODFLG	00CE	15/20	32#56	35/32	36/53	39/11		
	LSTLIN	AD7E	3/55	4/15	4/35	11/19	12/49	27/10	29/51
			32#20	35/52	36/11	36/51	38/21	38/49	50/51
			59/28						
	MEMRY	BF85	3/31	82# 6					
s	MEMTOP	02E5	27/50	28/ 6	78/37	78/40	78/47	82/13	82/16
	MEN1	A06E	2#13	2/32	2/34	11/16			
	MEN15	A073	2#15	2/19					
	MEN2	A096	2/24	2#29					
	MEN4	A0AC	2/30	2#40					
	MEN5	A0AF	2/37	2#41					
	MENU	A04D	1/38	1/40	1#49				
	MESSAG	A67F	2/21	3/15	3/42	4/12	5/27	9/24	11/14
			18#54	24/45	26/24	26/26	27/54	30/23	31/45
			35/37	36/ 9	36/56	37/42	37/55	38/18	38/44
			46/50	46/52	47/17	50/10	53/33	53/43	65/35
			82/23	82/52					
s	MOTRGD	0034	66/37	67/45	68/55				
s	MOTRST	003C	76/36						
	MRGNSW	00B4	2#54	4/23	56/28	56/34	56/45	57/56	58/12
	MSGBUF	A6F1	19/21	19/23	20#38				
	MSGFLG	009C	4#49	5/12	5/48	6/23	9/23	23/28	
	MSG51	A685	4/38	19#15	58/53				
s	NCOMHI	003C	73/23						
	NOISE1	BC4A	75#18	75/21					
	NOSCRD	A23A	6/18	6/44	6#47				
s	OPEN	mac	1/ 9	1/22	65/12				
s	OPEN	0003	1/10	1/23	65/13				
	OPNERR	00B9	3# 7	4/17	48/41	65/10	65/28		
	OPNIN	BA2E	68/37	68#53					
	OPNOUT	B966	66/21	66#31					
	OPNPRN	B8EC	4/16	48/40	65# 8				
	OPTION	A0B7	3#14	3/32	3/40	3/56	4/19	4/30	4/40
			12/55	50/54					
s	OREAD	0004	1/16						
	OUT1	A24F	5/41	7#10					
s	OWRIT	0008	65/19						
s	FACTL	D302	66/38	67/46	68/56	76/37			
s	PBCTL	D303	73/24						
	POINTE	ADA4	11/20	32#46					
s	POKMSK	0010	74/51	75/10	75/12	75/30	75/31		
	POSRTN	A656	11/53	14/15	14/26	18#24			
	PRFORM	00B2	32#47	34/ 9	34/12	34/18	34/26	55/54	56/ 8
			58/28	58/33					
	PRINTR	BFF7	65/15	65/17	83#30				
	PRNTSW	00BA	3# 8	4/10	38/23	46/44			
n	PRS	A1A1	5#20						
	PRS0	A1BA	5#31	5/44	5/46	6/21	6/35	6/40	

	PR51	A1FB	5/56	6/ 7	6#11	6/34	6/39	6/45	
	PR52	A200	5/30	6/10	6#13				
	PR53	A20C	6/15	6#19	6/55				
	PRSCNT	A18E	5/ 6	5/ 8	5#10	9/26			
n	PRSCRN	A173	4#50						
n	PRSRTN	A194	5#13						
	PUT2	B940	4/54	6/20	6/49	7/14	12/24	12/26	13/51
			25/35	25/46	65#51				
	PUT3	B944	4/21	49/44	57/34	58/19	65#53		
s	PUTCHR	000B	65/55						
	PUTOUT	B98F	66/22	66/23	66#52				
s	PUTR	mac	49/30						
s	PUTREC	0009	49/31	64/43					
	QTBLNK	A5D5	12/47	12/56	16#52	50/45	50/49	50/55	54/34
			55/15						
s	R1	0080	1/39	1/41	1/44	1/46	1/52	1/54	5/16
			5/19	6/27	7/18	7/21	7/41	7/52	8/29
			11/56	12/ 7	12/13	12/15	12/16	12/18	12/21
			15/ 7	15/10	15/27	15/46	16/ 9	16/23	21/33
			27/29	27/30	32/24	32/27	32/30	40/13	40/16
			40/28	40/33	40/35	40/36	40/38	40/49	40/51
			40/53	41/11	41/13	41/15	41/17	41/41	44/46
			48/27	48/28	49/54	61/37	78/ 8	78/10	78/12
			78/14	78/35	78/39	78/53	79/ 6	79/21	79/23
			79/25	79/29	79/35	79/37	79/40	79/45	79/47
			81/42	81/44	81/47				
s	R10	0092	27/23	27/24	38/55	38/56			
s	R11	0094	27/25	27/26	39/ 6	39/ 7			
s	R12	0096	27/27	27/28	39/ 8	39/ 9			
s	R13	0098	18/56	19/ 6	32/37	32/39	32/41		
s	R14	009A	19/ 7	19/ 8	26/30	26/33	26/36	56/16	56/17
s	R15	009C	4/49	19/ 9	19/10	56/18	56/19		
s	R16	009E	19/11	56/20					
s	R2	0082	1/56	2/ 7	7/23	7/25	9/31	10/14	10/18
			10/20	10/24	10/30	10/40	10/43	10/45	10/49
			14/52	14/54	15/24	15/38	15/53	21/34	27/31
			27/32	33/12	33/15	40/14	40/17	40/20	40/22
			40/23	40/25	40/27	40/41	40/43	40/44	40/46
			41/42	41/43	48/29	48/30	49/55	49/56	61/38
			78/36	78/45	78/54	79/ 7	79/17	79/19	79/26
			79/30						
s	R3	0084	2/ 9	2/11	7/29	7/30	14/45	14/46	21/35
			27/33	27/34	41/44	41/45	50/ 6	50/ 7	61/39
s	R4	0086	7/31	7/32	14/47	14/48	21/36	21/37	27/35
			27/36	33/13	41/46	41/47	58/51		
s	R5	0088	11/30	11/31	14/49	14/50	18/31	18/34	18/41
			18/44	27/37	41/48	58/50			
s	R6	008A	7/33	11/32	11/33	18/24	41/49	41/50	56/21
s	R7	008C	7/34	7/35	11/34	11/35	18/35	18/36	18/46

			18/47	18/48	41/51
S	R8	008E	11/36	18/32	41/52

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S	R9	0090	27/21	27/22	38/30	38/32	38/53	38/54	82/27
			0/ 0						
	RCLGHI	008D	7#35	7/38	8/44	9/40	9/42		
	RCLGLO	008C	7#34	7/37	8/42	9/36	9/39		
	RDBLK	BABF	69/34	70#29					
	RDDATA	A9D9	11/11	22#13					
	RDSCXT	A5B8	16/13	16#15					
	READIN	BA54	68/40	68/45	69#25				
	RECCNT	00C8	29/44	29/46	29/47	29/49	32#52	33/52	33/54
			34/31	34/32	35/55	36/ 6	41/21	41/23	41/24
			41/26	63/32	63/34				
	RECCTR	A355	7/48	8/ 6	9#35				
	RECEIV	BB9C	70/51	73#16					
	RECLNG	00C6	27/45	27/48	29/27	29/30	32#51	33/33	33/35
			34/38	34/41	37/24	37/27	37/36	37/39	38/ 8
			38/11	40/21	40/24	41/30	41/33	43/55	44/ 7
			47/43	47/46	47/55	48/ 7	59/32	59/35	59/55
			60/ 7	60/12	60/15	60/29	60/32	60/52	60/54
			63/10	63/13	82/ 6	82/ 8			
S	RECVDN	0039	73/19	73/25					
	RECVDS	BC57	70/52	75#28					
	RECVEN	BC26	73/20	74#54					
	RESET	B2E4	36/50	47/18	48#13				
	RETRV	AE67	3/39	35#29					
	ROUND	B8E7	63/56	64/ 7	64#55				
	ROWCNT	0085	7#30	7/40	8/ 8	8/21	8/22		
S	RTCLOK	0012	71/34	71/46					
	RTRNKE	A232	6/ 9	6#42					
S	SAVIO	0316	71/32	71/40	71/42	72/37	72/47		
	SCDATA	BE9F	1/55	2/ 6	81#18				
	SCR0	A55F	2/12	15#17					
	SCR05	A563	15/16	15#19					
	SCR1	A56C	15#23	15/35					
	SCR15	A583	15/31	15#34	15/43				
	SCR2	A589	15/29	15/33	15#36				
	SCR3	A595	15#42	15/47					
	SCREEN	A53E	3/54	5/ 9	11/18	12/48	14#44	29/50	35/51
			36/19	38/16	41/35	48/17	50/12	50/46	50/50
			61/42						
	SCRNBF	0600	7/22	7/24	14/51	14/53	23/34	23/36	83#31
			83/32						
	SCRNBO	A229	5/54	6#37					
	SCRNPR	B2F4	38/40	48#26					
	SCRNPT	0086	14#47	15/21	15/26	15/45	16/ 7		
	SCRNT0	A220	5/52	6#32					
S	SECFLG	00B5	68/39	68/42	69/27	69/41	70/19	73/27	
	SEND	B9FE	67/50	68#17					
	SENDDS	BC57	67/52	75#27					
	SENDEN	BC04	66/36	67/37	68/19	74#40			

S SEROUT D20D 68/25
 S SETVBV E45C 66/42 69/ 9 73/53

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	SETVBX	BBC6	67/43	70/49	71/23	73#47			
S	SKCTL	D20F	74/49	75/ 7	76/39				
S	SKRES	D20A	75/ 8						
S	SKSTAT	D20F	71/24	71/38	71/50	71/52			
	SRCH1	B0CD	4/24	38/24	41#40				
	SRTLNG	0087	58#51	59/38					
	SRTOFF	0088	58#50	59/15	59/18	60/40	60/43	60/47	60/50
	SRTPT1	00E0	58#42	59/16	59/19	59/20	59/25	59/31	59/34
			59/45	59/54	59/56	60/ 6	60/ 8	60/39	60/42
	SRTPT2	00E2	58#43	59/33	59/36	59/42	60/11	60/13	60/14
			60/16	60/17	60/22	60/46	60/49		
	SRTPT3	00E4	58#44	59/ 6	59/ 8	59/21	59/26	60/18	60/23
			60/28	60/30	60/31	60/33			
S	SSKCTL	0232	71/51	74/41	74/48	74/55	75/ 6		
	START	A000	1# 7	83/42					
S	STATUS	0030	22/19	69/33	69/50	70/ 7	73/22	76/43	76/49
	STMFLG	BBDD	73/47	73/49	74# 9				
	STORDA	ABD4	3/37	27#20					
	STTMOT	BBE3	70/48	74#14					
S	SUB16	mac	37/34	41/20	41/28	42/31	60/27		
	SUMFLG	00D2	33# 8	35/33	36/17	36/21	36/30	36/40	
	SUMMRY	B79E	36/28	36/36	61#36				
	SW128	0089	14#50	15/15	15/18	15/30			
	T1	00E6	58#45	60/41	60/44	61/ 6	61/ 9	61/14	61/16
			61/17	61/19					
	T2	00E8	58#46	60/48	60/51	61/ 8	61/11	61/22	61/24
			61/25	61/27					
	T3	00EA	58#47	60/53	60/55	61/28	61/30		
	TAPOUT	A2F8	8/38	8#42					
	TBDHI	0302	72#39	72/43	72/49	72/51	72/56		
	TBDLO	0301	72#38	72/41	72/46	72/48	72/54		
S	TEMP1	0312	72/23	72/34					
	THOLD	00ED	58#49	59/44	59/47				
S	TIMER1	030C	71/35	71/36	72/17	72/19	72/22	72/26	
S	TIMER2	0301	72/13	72/14	72/16	72/20	72/24	72/38	72/39
S	TIMFLG	0317	67/47	71/27	73/55	74/10			
	TONE	BD2B	14/16	14/27	25/33	25/39	77#42		
	TONE1	BD3C	77#50	77/52					
	TONHLD	00B0	2#51	77/49	77/51				
	TPOT1	A316	8#55	9/10					
	TPOT15	A341	9/19	9#23					
	TPOT2	A34C	9/21	9#27					
	TPOT3	A34D	8/32	8/40	8/43	8/45	8/47	8/48	8/50
			9/ 6	9/ 8	9/12	9/14	9/16	9#29	
	UNDO	BF6A	2/25	11/17	81#39				
S	VCOUNT	D40B	71/33	71/45					
	WARM	00B8	2/28	2/33	3# 6	5/ 7	11/ 9	11/22	
	WFL	BC97	76#15	76/26					

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	XCNGSW	00EC	58#48	58/55	59/ 9	59/12	60/37
S	XMTDON	003A	68/23	68/27			
	ZERIT	BC64	75#35	75/38			
S	ZFR0	DA44	62/43	62/52			
	ZR01	A5BF	16#23	16/25			
	ZROREG	A5BB	4/50	7/10	11/10	16#21	
	ZTBUF	BCB4	76#32	76/34			

120 REM
 130 RC



— program from
 — long from 00
 — small from
 — program must be in 12000
 — 12000
 — program from 12000 to 12000
 — 12000